

TENTATIVE

HITACHI

SERVICE MANUAL

NTSC

SN-91 Chassis

PA

No. 0137

27CX01B

R/C: CLU-341U

CONTENTS

	Page
• ELECTRICAL SPECIFICATIONS	1
• IMPORTANT SERVICE SAFETY PRECAUTION	2
• LOCATION OF USER'S CONTROL	6
• INSTALLATION AND SERVICE INSTRUCTIONS	7
• CHASSIS LAYOUT	13
• BLOCK DIAGRAM	14
• SCHEMATIC DIAGRAMS	15
• PRINTED WIRING BOARD ASSEMBLIES	22
• REPLACEMENT PARTS LIST	25
• PACKING OF THE SET	33

ELECTRICAL SPECIFICATIONS

POWER INPUT 120 V AC 60 Hz
POWER RATING 110 W
PICTURE SIZE 2,187cm² (339sq inch)
CONVERGENCE Magnetic
SWEEP DEFLECTION Magnetic
FOCUS Hi-Bi-Potential Electrostatic
INTERMEDIATE FREQUENCIES
Picture IF Carrier Frequency 45.75 MHz
Sound IF Carrier Frequency 41.25 MHz
Color Sub-Carrier Frequency 42.17 MHz
(Nominal)

AUDIO POWER

OUTPUT RATING 1.3W + 1.3W (at 10% distortion and
Dual CH Operate)

SPEAKER

SIZE 8 cm (Round)
VOICE COIL IMPEDANCE 32 ohm at 400 Hz

ANTENNA INPUT IMPEDANCE

VHF/UHF 75 ohm Unbalanced


TUNING RANGES

VHF-Channels 2 thru 13
UHF-Channels 14 thru 69
CATV Channels 1 thru 125
(EIA, Channel Plan U.S.A.)

CAUTION: Before servicing this chassis, it is important that the service technician read the "Safety Precaution" and "Product Safety Notices" in this service manual.
In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

SAFETY NOTICE

USE ISOLATION TRANSFORMER WHEN SERVICING

Components having special safety characteristics are identified by a  on the schematics and on the parts list in this Service Data and its supplements and bulletins. Before servicing the chassis, it is important that the service technician read and follow the "Safety Precautions" and "Product Safety Notices" in this Service Manual.

*For continued x-radiation protection, replace picture tube with original type of Hitachi approved equivalent type.

SPECIFICATIONS AND PARTS ARE SUBJECT TO CHANGE FOR IMPROVEMEN

SOLID STATE COLOR TELEVISION

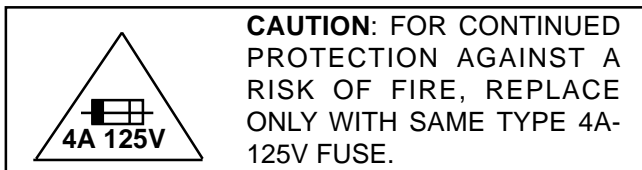
MAY 2000 HHEA-MANUFACTURING DIVISION

IMPORTANT SERVICE SAFETY PRECAUTION

- **Service work should be performed only by qualified service technicians who are thoroughly familiar with all safety checks and the servicing guidelines which follow:**

WARNING

1. For continued safety, no modification of any circuit should be attempted.
2. Disconnect AC power before servicing.
3. Semiconductor heat sinks are potential shock hazards when the chassis is operating.
4. The chassis in this receiver has two ground systems which are separated by insulating material. The non-isolated (hot) ground system is for the B+ voltage regulator circuit and the horizontal output circuit. The isolated ground system is for the low B+ DC voltages and the secondary circuit of the high voltage transformer.
To prevent electrical shock use an isolation transformer between the line cord and power receptacle, when servicing this chassis.



SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove the static charge by connecting a 10k ohm resistor in series with an insulated wire (such as a test probe) between the picture tube ground and the anode lead. (AC line cord should be disconnected from AC outlet.)

1. Picture tube in this receiver employs integral implosion protection.
2. Replace with tube of the same type number for continued safety.
3. Do not lift picture tube by the neck.
4. Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage anode completely.

X-RADIATION AND HIGH VOLTAGE LIMITS

1. Be sure all service personnel are aware of the procedures and instructions covering X-radiation. The only potential source of X-ray in current solid state TV receivers is the picture tube. However, the picture tube does not emit measurable X-Ray radiation, if the high voltage is as specified in the "High Voltage Check" instructions.
It is only when high voltage is excessive that X-radiation is capable of penetrating the shell of the picture tube including the lead in the glass material. The important precaution is to keep the high voltage below the maximum level specified.
2. It is essential that servicemen have available at all times an accurate high voltage meter.
The calibration of this meter should be checked periodically.
3. High voltage should always be kept at the rated value –no higher. Operation at higher voltages may cause a failure of the picture tube or high voltage circuitry and;also, under certain conditions, may produce radiation in exceeding of desirable levels.
4. When the high voltage regulator is operating properly there is no possibility of an X-radiation problem. Every time a color chassis is serviced, the brightness should be tested while monitoring the high voltage with a meter to be certain that the high voltage does not exceed the specified value and that it is regulating correctly.
5. Do not use a picture tube other than that specified or make unrecommended circuit modifications to the high voltage circuitry.
6. When trouble shooting and taking test measurements on a receiver with excessive high voltage, avoid being unnecessarily close to the receiver.
Do not operate the receiver longer than is necessary to locate the cause of excessive voltage.

IMPORTANT SERVICE SAFETY PRECAUTION

(Continued)

BEFORE RETURNING THE RECEIVER

(Fire & Shock Hazard)

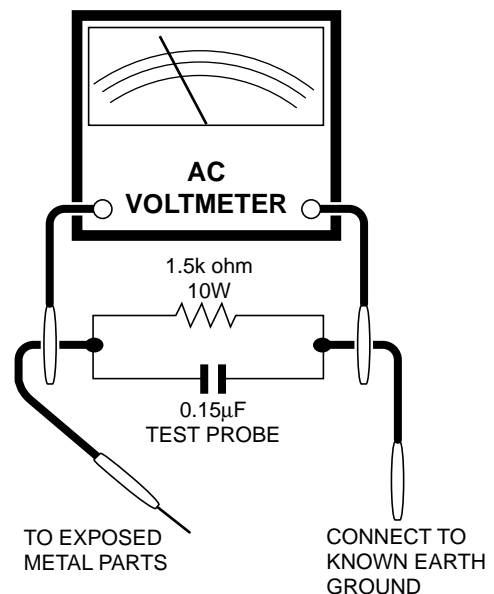
Before returning the receiver to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating materials, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators, etc.
3. To be sure that no shock hazard exists, check for leakage current in the following manner.
 - Plug the AC cord directly into a 120 volt AC outlet, (Do not use an isolation transformer for this test).
 - Using two clip leads, connect a 1.5k ohm, 10 watt resistor paralleled by a 0.15 μ F capacitor in series with all exposed metal cabinet parts and a known earth ground, such as electrical conduit or electrical ground connected to earth ground.
 - Use an AC voltmeter having with 5000 ohm per volt, or higher, sensitivity to measure the AC voltage drop across the resistor.

- Connect the resistor connection to all exposed metal parts having a return to the chassis (antenna, metal cabinet, screw heads, knobs and control shafts, escutcheon and etc.) and measure the AC voltage drop across the resistor.

All checks must be repeated with the AC line cord plug connection reversed. (If necessary, a non-polarized adapter plug must be used only for the purpose of completing these check.)

Any current measured must not exceed 0.5 milliamp. Any measurements not within the limits outlined above indicate of a potential shock hazard and corrective action must be taken before returning the instrument to the customer.



SAFETY NOTICE

Many electrical and mechanical parts in television receivers have special safety-related characteristics. These characteristics are often not evident from visual inspection, nor can protection afforded by them be necessarily increased by using replacement components rated for higher voltage, wattage, etc.

Replacement parts which have these special safety characteristics are identified in this manual; electrical components having such features are identified by " \triangle " and shaded areas in the Replacement Parts Lists and Schematic Diagrams.

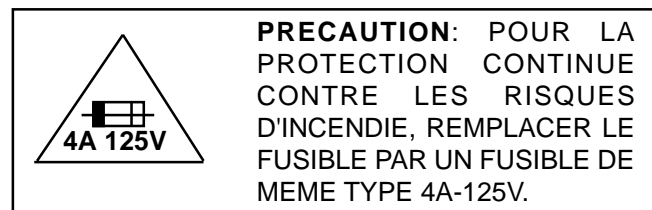
For continued protection, replacement parts must be identical to those used in the original circuit. The use of substitute replacement parts which do not have the same safety characteristics as the factory recommended replacement parts shown in this service manual, may create shock, fire, X-radiation or other hazards.

PRECAUTIONS A PRENDRE LORS DE LA REPARATION

- **Ne peut effectuer la réparation qu' un technicien spécialisé qui s'est parfaitement accoutumé à toute vérification de sécurité et aux conseils suivants.**

AVERTISSEMENT

1. N'entreprendre aucune modification de tout circuit. C'est dangereux.
2. Débrancher le récepteur avant toute réparation.
3. Les déversoirs thermiques à semi-conducteurs peuvent présenter un danger de choc électrique lorsque le récepteur est en marche.
4. Le châssis de ce récepteur possède deux systèmes de masse qui sont séparées par du matériel d'isolation. Le système de masse non-isolée (sous tension) est pour le circuit du régulateur de tension B+ et le circuit de sortie horizontale. Le système de masse isolée est pour les tensions DC B+ basses et le circuit secondaire du transformateur haute tension. Pour éviter tout risque d'électrocution lors de l'entretien de ce châssis, utiliser un transformateur d'isolation entre le cordon de ligne et la prise de courant.



REPARATION DU SYSTEME A HAUTE TENSION ET DU TUBE-IMAGE

Lors de la réparation de ce système, supprimer la charge statique en branchant une résistance de 10 k Ω en série avec un fil isolé (comme une sonde d'essai) entre la mise à la terre du tube-image et le fil d'anode. (Le cordon d'alimentation doit être retiré de la prise murale.)

1. Le tube image dans ce récepteur emploie une protection intégrée contre l'implosion.
2. Par mesure de sécurité, changer le tube-image pour un tube du même numéro de type.
3. Ne pas lever le tube-image par son col.
4. Ne manipuler le tube-image qu'en portant des lunettes incassables et qu'après avoir déchargé totalement la haute tension.

LIMITES DES RADIATIONS X ET DE LA HAUTE TENSION

1. Tout le personnel réparateur doit être instruit des instructions et procédés relatifs aux radiations X. Le tube-image, seule source de rayons X dans les téléviseurs transistorisés, n'émet pourtant pas de rayons mesurables si la haute tension est maintenue à un niveau préconisé dans la section "Vérification de la haute tension". C'est seulement quand la haute tension est excessive que les rayons X peuvent entrer dans l'enveloppe du tube-image y compris le conducteur de verre. Il est important de maintenir la haute tension en-dessous du niveau spécifié.
2. Il est essentiel que le réparateur ait sous la main un voltmètre à haute tension qui doit être périodiquement étalonné.
3. La haute tension doit toujours être maintenue à la valeur de régime -et pas plus haute. L'opération à des tensions plus élevées peut entraîner une panne du tube-image ou du circuit à haute tension et, dans certaines conditions, peut entraîner une radiation dépassant les niveaux prescrits.
4. Quand le régulateur à haute tension fonctionne correctement, il n'y a aucun problème de radiation X. Chaque fois qu'un châssis couleurs est réparé, la luminosité doit être examinée tout en contrôlant la haute tension à l'aide d'un voltmètre pour s'assurer que la haute tension ne dépasse pas la valeur spécifiée et qu'elle soit correctement réglée.
5. Ne pas utiliser un tube-image autre que celui spécifié et ne pas effectuer de modifications déconseillées du circuit à haute tension.
6. Lors de la recherche des pannes et des mesures d'essai sur un récepteur qui présente une haute tension excessive, éviter de s'approcher inutilement du récepteur.
Ne pas faire fonctionner le récepteur plus longtemps que nécessaire pour localiser la cause de la tension excessive.

PRECAUTIONS A PRENDRE LORS DE LA REPARATION

(Suite)

VERIFICATIONS CONTRE L'INCEN-DIE ET LE CHOC ELECTRIQUE

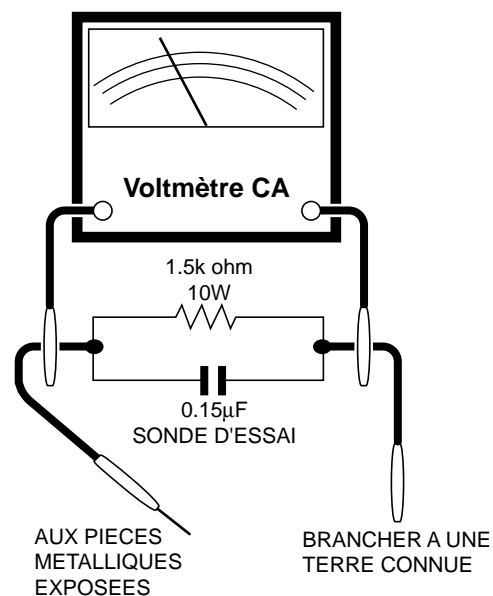
Avant de rendre le récepteur à l'utilisateur, effectuer les vérifications suivantes.

1. Inspecter tous les faisceaux de câbles pour s'assurer que les fils ne soient pas pincés ou qu'un outil ne soit pas placé entre le châssis et les autres pièces métalliques du récepteur.
2. Inspecter tous les dispositifs de protection comme les boutons de commande non-métalliques, les isolants, le dos du coffret, les couvercles ou blindages de réglage et de compartiment, les réseaux de résistance-capacité, les isolateurs mécaniques, etc.
3. S'assurer qu'il n'y ait pas de danger d'électrocution en vérifiant la fuite de courant, de la façon suivante:
 - Brancher le cordon d'alimentation directement à une prise de courant de 120V. (Ne pas utiliser de transformateur d'isolation pour cet essai).
 - A l'aide de deux fils à pinces, brancher une résistance de 1,5 k Ω 10 watts en parallèle avec un condensateur de 0,15 μ F en série avec toutes les pièces métalliques exposées du coffret et une terre connue comme une conduite électrique ou une prise de terre branchée à la terre.
 - Utiliser un voltmètre CA d'une sensibilité d'au moins 5000 Ω /V pour mesurer la chute de tension en travers de la résistance.

- Toucher avec la sonde d'essai les pièces métalliques exposées qui présentent une voie de retour au châssis (antenne, coffret métallique, tête des vis, arbres de commande et des boutons, écusson, etc.) et mesurer la chute de tension CA en-travers de la résistance. Toutes les vérifications doivent être refaites après avoir inversé la fiche du cordon d'alimentation. (Si nécessaire, une prise d'adaptation non polarisée peut être utilisée dans le but de terminer ces vérifications.)

Tous les courants mesurés ne doivent pas dépasser 0,5 mA.

Dans le cas contraire, il y a une possibilité de choc électrique qui doit être supprimée avant de rendre le récepteur au client.



AVIS POUR LA SECURITE

De nombreuses pièces, électriques et mécaniques, dans les téléviseurs présentent des caractéristiques spéciales relatives à la sécurité, qui ne sont souvent pas évidentes à vue. Le degré de protection ne peut pas être nécessairement augmentée en utilisant des pièces de remplacement étalonnées pour haute tension, puissance, etc.

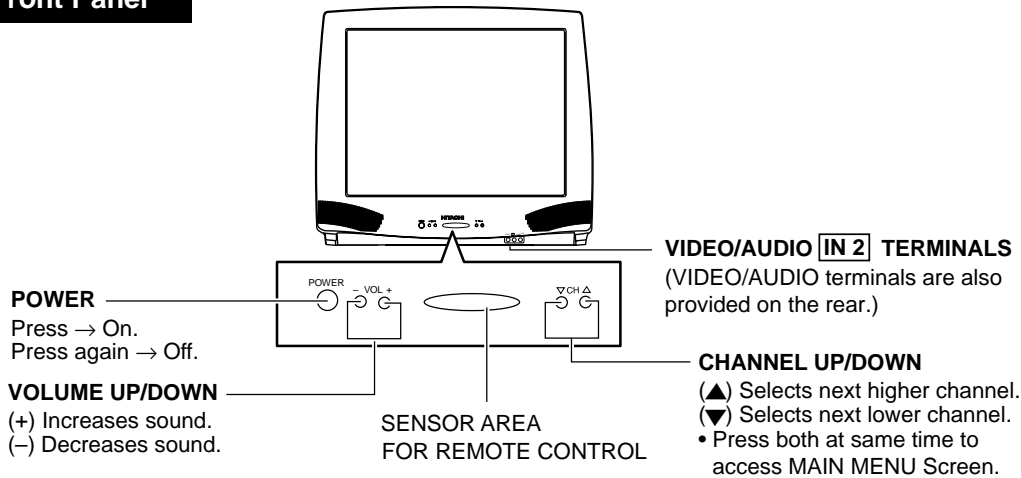
Les pièces de remplacement qui présentent ces caractéristiques sont identifiées dans ce manuel; les pièces électriques qui présentent ces particularités sont

identifiées par la marque " ⚠ " et hachurées dans la liste des pièces de remplacement et les diagrammes schématiques.

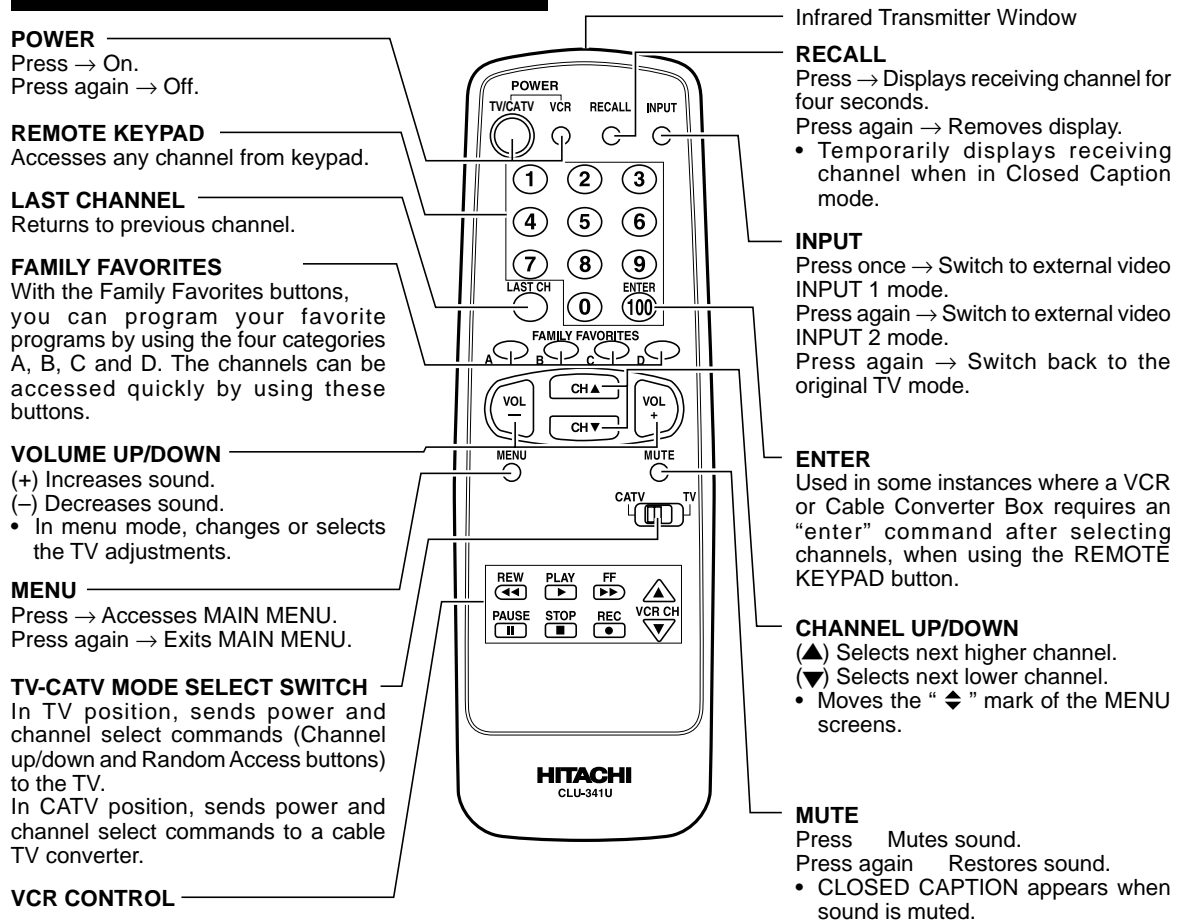
Pour assurer la protection, ces pièces doivent être identiques à celles utilisées dans le circuit d'origine. L'utilisation de pièces qui n'ont pas les mêmes caractéristiques que les pièces recommandées par l'usine, indiquées dans ce manuel, peut provoquer des électrocutions, incendies, radiations X ou autres accidents.

LOCATION OF USER'S CONTROL

Front Panel



Basic Remote Control Functions



NOTE:

- The above shaded buttons on the Remote Control glow in the dark. To use the glow-in-the-dark display on the remote control, place it under a fluorescent light or other lighting.
- The phosphorescent material contains no radioactive or toxic material, so it is safe to use.
- The degree of illumination will vary depending on the strength of lighting used.
- The degree of illumination will decrease with time and depending on the temperature.
- The time needed to charge the phosphorescent display will vary depending on the surrounding lighting.
- Sunlight and fluorescent lighting are the most effective when charging the display.

INSTALLATION AND SERVICE INSTRUCTIONS

Note: (1) When performing any adjustments to resistor controls and transformers use non-metallic screwdrivers or TV alignment tools.
(2) Before performing adjustments, the TV set must be on at least 15 minutes.

CIRCUIT PROTECTION

The receiver is protected by a 4.0A fuse (F701), mounted on PWB-A, wired into one side of the AC line input.

X-RADIATION PROTECTOR CIRCUIT TEST

After service has been performed on the horizontal deflection system, high voltage system, B+ system, test the X-Radiation protection circuit to ascertain proper operation as follows:

1. Apply 120V AC using a variac transformer for accurate input voltage.
2. Allow for warm up and adjust all customer controls for normal picture and sound.
3. Receive a good local channel.
4. Connect a digital voltmeter to TP653 and make sure that the voltmeter reads $11.2 \pm 0.6V$.
5. Apply external 13.8V DC at TP653 by using an external DC supply, TV must shut off.
6. To reset the protector, unplug the AC cord and make a short circuit between TP651 and TP652. Now make sure that normal picture appears on the screen.
7. If the operation of the horizontal oscillator does not stop in step 5, the circuit must be repaired before the set is returned to the customer.

HIGH VOLTAGE CHECK

High voltage is not adjustable but must be checked to verify that the receiver is operating within safe and efficient design limitations as specified. Checks should be as follows:

1. Connect an accurate high voltage meter between ground and anode of picture tube.
2. Operate receiver for at least 15 minutes at 120V AC line voltage, with a strong air signal or a properly tuned in test signal.
3. Enter the service mode and select the service adjustment "S19" and Bus data "01" (Y-mute on).
4. The voltage should be approximately, 28.7kV (at zero beam).

If a correct reading cannot be obtained, check circuitry for malfunctioning components. After the voltage test, make Y-mute off to the normal mode.

For adjustments of this model, the bus data is converted to various analog signals by the D/A converter circuit.

Note: There are still a few analog adjustments in this series such as focus and master screen voltage. Follow the steps below whenever the service adjustment is required. See "Table-B" to determine, if service adjustments are required.

1. Service mode

Before putting unit into the service mode, check that customer adjustments are in the normal mode. Use the reset function in the video adjustment menu to ensure customer controls are in their proper (reset) position.

2. Service number selection

Once in the service mode, press the Ch-up or Ch-down button on the remote controller or at the set. The service adjustment number will vary in increments of one, from "S01" to "M05". Select the item you wish to adjust.

3. Data number selection

Press the Vol-up or down button to adjust the data number.

To enter the service mode and exit service mode.

While pressing the Vol-up and Ch-up buttons at the sametime, plug the AC cord into a wall socket. Now the TV set is switched on and enters the service mode.

To exit the service mode, turn the television off by pressing the power button.

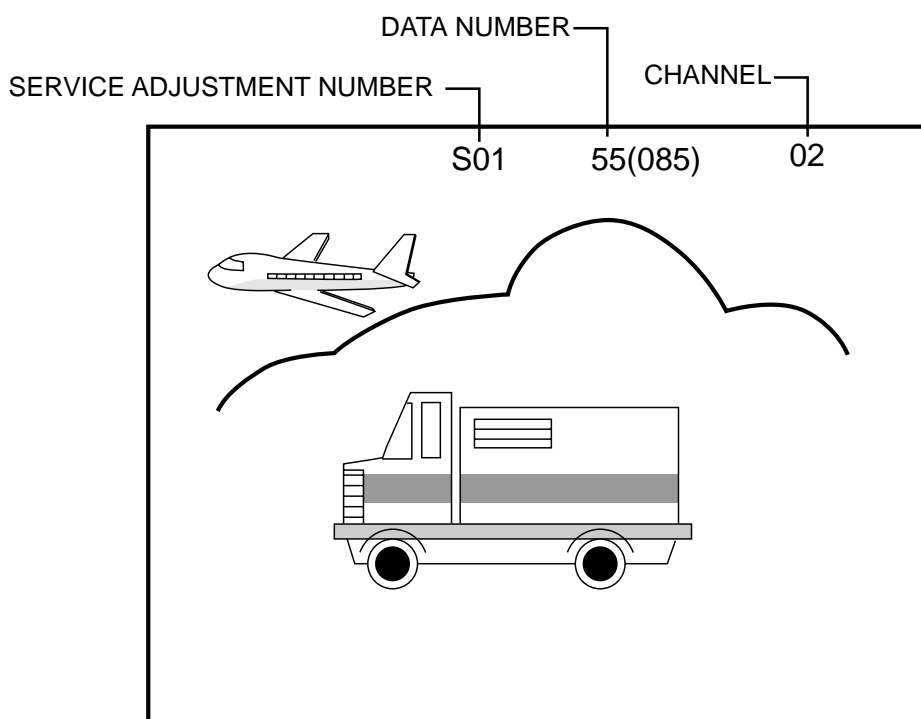


Figure A.

SERVICE NUMBER	ADJUSTMENT ITEM	DATA		ADJUSTMENT CONTENTS
		INITIAL VALUE	RANGE	
S01	PICTURE	55	00-7F	Must be set to "28" Must be set to "00"
S02	TINT	46	00-7F	
S03	COLOR	32	00-7F	
S04	BRIGHTNESS	40	00-7F	
S05	SHARPNESS	28	00-3F	
S06	VERTICAL PHASE	00	00-07	
S07	HORIZONTAL PHASE	12	00-1F	
S08	RF-AGC	23	00-3F	
S09	VERTICAL AMP	20	00-3F	
S10	PIF VCO	2C	00-7F	
S11	R CUT-OFF	00	00-FF	Must be set to "00" Must be set to "20"
S12	G CUT -OFF	00	00-FF	
S13	B CUT-OFF	00	00-FF	
S14	G GAIN	7F	00-FF	
S15	B GAIN	7F	00-FF	
S16	TRAP	00	00 or 01	
S17	BALANCE	20	00-3F	
S18	C.C.POSITION	17	00-7F	
S19	MUTE	00	00,01,03	
S20	ENERGY SAVE OFFSET	20	00-3F	
S21	D.D.E. OFFSET	03	00-1F	"00"=Normal, "01"=No-Y, "03"=No Vertical Must be set to "23" Must be set to "03" Must be set to "00" Must be set to "00" "B3" "A7"
S22	OSD SETUP	00	00-03	
S23	TUNER SETUP	00	00, 01	
OP1	OPTION1 (Set to each mode)	00	00-FF	
OP2	OPTION2	00	00-FF	
M01	INPUT LEVEL	0A	00-0F	
M02	ST VCO	20	00-3F	
M03	FILTER	1C	00-3F	
M04	WIDE BAND	20	00-3F	
M05	SPECTRAL	1B	00-3F	

Table - A

Holding down both the Vol-up/CH-down buttons on the TV set at service mode for more than 2 seconds will automatically write the above initial values into IC2101.

PART REPLACED	ADJUSTMENT		NOTES
	NECESSARY	UNNECESSARY	
IC2001		X	Data is stored in IC2101.
IC201	X		The adjustment is needed to compensate for characteristics of parts including IC201 and MTS level (M01).
IC2101	X		Holding down both the Vol-up/CH-down buttons on the TV set in the service mode for more than 2 seconds will automatically write the above initial values into IC2101. Then perform a complete adjustment.
CRT	X		Adjust items related to picture tube only.
IC3001	X		Adjust items related to MTS only (M01~M05).

Table - B

■ SERVICE ADJUSTMENT

VCO Adjustment

1. Connect a digital voltmeter between pin (44) of IC201 and ground.
2. Receive a good local channel.
3. Enter the service mode and select the service adjustment "S10".
4. Adjust the data so that digital voltmeter reads 2.2V.
5. Adjustment is completed, remove the voltmeter, return to "normal" mode.

RF AGC Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S08".
3. Set the data value to point where no noise or beat appears.
4. Select another channel to confirm that no noise or beat appears.

Note 1 : You will have to come out of the service mode to select another channel.

Note 2 : Setting the data to "00" will produce a black raster.

Screen Adjustment

1. Connect a oscilloscope between TP854 and GND on the CRT Unit.
2. Receive a good local channel.
3. Enter the service mode and select the service adjustment "S03" and set the data value to "00" to set the color level to minimum. (Record original data code under adjustment "S03" before changing) You may skip this step, if you selected a B/W picture or monoscope pattern.
4. Select the service adjustment "S19" and adjust the data value to "01", this turn off the luminance signal (Y-mute).
5. Select the service adjustment "S04" and adjust data value to obtain 2.35 volts on the oscilloscope screen.
6. Adjust the master screen control until the raster darkens to the point where raster is barely seen.
7. Adjust the service adjustments "S11" red, "S12" green and "S13" blue to obtain a good grey scale with normal whites at low brightness level.
8. Select the service adjustment "S19" and reset data to "00". Select the service adjustment "S03" and reset data to obtain normal color level.
9. Remove oscilloscope, and reset the master screen control to obtain normal brightness range.

White Balance Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S03" and set to "00" (minimum color)(Record original data code under adjustment "S03" before changing). "S03" does not have to be adjusted, if you selected a B/W picture or monoscope pattern.
3. Alternately adjust the service adjustment data of "S14" and "S15" until a good grey scale with normal whites is obtained.
4. Select the service adjustment "S03" and adjust data to obtain normal color level.

Sub-Picture Adjustment

1. Receive a good local channel.
2. Make sure the customer picture control is set to maximum.
3. Enter the service mode and select the service adjustment "S01".
4. Adjust the data value to achieve normal contrast range.

Sub-Tint Adjustment

1. Receive a good local channel.
2. Set customer tint control to center of it's range.
3. Enter the service mode and select the service adjustment "S02".
4. Adjust "S02" data value to obtain normal flesh tones.

Sub-Color Adjustment

1. Receive a good local channel.
2. Make sure the customer color control is set to center position .
3. Enter the service mode and select service adjustment "S03".
4. Adjust "S03" data value to obtain normal color level.

Sub-Brightness Adjustment

1. Receive a good local channel.
2. Make sure the customer brightness control is set to center position.
3. Enter the service mode and select the service adjustment "S04".
4. Adjust "S04" data value to obtain normal brightness level.

Vertical-Size Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S09".
3. While observing the top and bottom of the screen, adjust "S09" data value to proper vertical size.

Vertical Phase Adjustment

1. Enter the service mode and select the service adjustment "S06".
2. Adjust data value to "00".

Note: This must be set "00" when changed data retrace line will appear.

Horizontal Position Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S07".
3. Adjust "S07" data value so that picture is centered.

Caption Position Adjustment (Horizontal)

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S18".
3. A black text box appears on the screen. (see **Figure B.** below)
4. Adjust "S18" data value so that text box is positioned in the center of the screen.

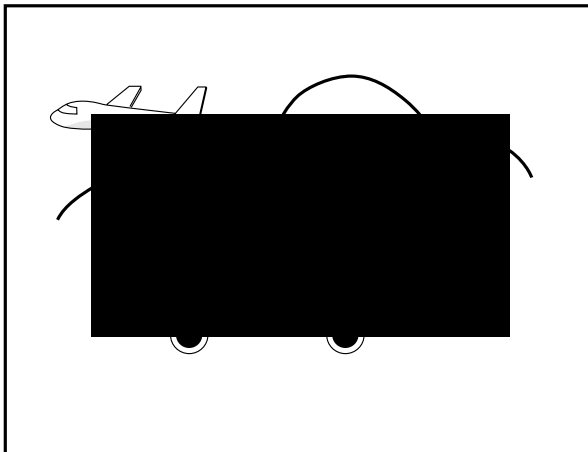


Figure B.

3.58MHz Trap Adjustment

1. Receive a good local channel.
2. Enter the service mode and select the service adjustment "S16".
3. This is a two position adjustment, "00" is ON, "01" is OFF.
4. Models should be adjusted as follows.

MODEL	"S16"
27CX01B	01

Sharpness and Audio Balance Adjustments

1. Receive a good local channel.
2. Enter the service mode and select the service adjustments "S05" for sharpness and "S17" for balance.

• Sharpness Adjustment

3. Adjust data value to "28"(center of data range) for sharpness adjustment.

• Audio Balance Adjustment

4. Adjust data value to "20"(center of data range) for audio balance adjustment.

Energy save offset Adjustment

1. Enter the service mode and select the service adjustment "S20".
2. Adjust data value to "23".

Note : This position is used to preset the level for the energy save function.

Other Adjustments

1. Enter the service mode.
2. Adjust the following data values as listed below.

S21	"03"	DDE OFFSET
S22	"00"	OSD SETUP
S23	"00"	TUNER SETUP

■ MTS ADJUSTMENT

MTS Level Adjustment

1. Feed the following monaural signal to pin (14) of IC3001.
Monaural signal : 300Hz, 245mVrms
2. Connect the rms voltmeter to pin (39) of IC3001.
3. Enter the service mode and select the service adjustment "M01".
4. Adjust the data so that the rms voltmeter reads.
Spec.: $490 \pm 10\text{mVrms}$.

MTS VCO Adjustment

1. Keep the unit in no-signal state.
2. Connect the frequency counter to pin (39) of IC3001.
3. Connect a capacitor (100 μ F, 50V) in between positive(+) side of C3005 and ground.
4. Enter the service mode and select the service adjustment "M02".
5. Adjust the data so that the frequency counter reads.
Spec.: $62.94 \pm 0.75\text{kHz}$.

Filter Adjustment

1. Feed the following stereo pilot signal to pin (14) of IC3001 .
Stereo pilot signal: 9.4kHz, 600mVrms.
2. Enter the service mode and select the service adjustment "M03".
3. Adjust the data at the point where "OK" appears on the screen. The "OK" represents the approximate center of the adjustable range of the data.

Separation Adjustment

1. Connect the rms voltmeter to pin (39) of IC3001.
2. Receive the following composite stereo signal 1.
Composite stereo signal: 30% modulation, left channel only, noise reduction on, 300Hz
3. Enter the service mode and select the service adjustment "M04".
4. Adjust the data until the AC voltage reading of the rms voltmeter is minimum.
5. Receive the following composite stereo signal 2.
Stereo signal: 30% modulation, left channel only, noise reduction on, 3kHz
6. Enter the service mode and select the service adjustment "M05".
7. Adjust the data until the AC voltage reading of the rms voltmeter is minimum.
8. Take the above steps 1 thru 8 again for fine adjustment.

A	B	C	D	E	F	G	H
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BLOCK DIAGRAM

The diagram illustrates the internal circuitry of a television receiver, organized into several main sections:

- Power Regulation:** Includes IC751 (9V-B REGULATOR), IC750 (9V REGULATOR), and IC101 (REGULATOR) connected to a 120V AC input and a 12V-B output.
- System Control:** IC2001 (SYSTEM CONTROL) is the central microcontroller, interfaced with IC2101 (EEPROM) and IC2040 (RESET).
- Video Processing:** IC201 (PIF, SIF, CHROMA VIDEO, DEFLECTION) handles video signals, interfaced with IC1501 (S-VIDEO SW) and IC3001 (MTS DECODER).
- Audio Processing:** IC351 (L-SOUND OUTPUT) and IC352 (R-SOUND OUTPUT) drive the audio output, while IC951 (EXT VIDEO SW) and IC1501 (S-VIDEO SW) handle video switching.
- Display Drivers:** IC501 (VERT OUTPUT) and IC601 (HORIZ DRIVER) drive the vertical and horizontal deflection coils (T601, T602).
- Other Components:** Includes various transistors (Q201, Q202, Q203, Q204, Q205, Q206, Q207, Q208, Q209, Q210, Q211, Q212, Q213, Q214, Q215, Q216, Q217, Q218, Q219, Q220, Q221, Q222, Q223, Q224, Q225, Q226, Q227, Q228, Q229, Q230, Q231, Q232, Q233, Q234, Q235, Q236, Q237, Q238, Q239, Q240, Q241, Q242, Q243, Q244, Q245, Q246, Q247, Q248, Q249, Q250, Q251, Q252, Q253, Q254, Q255, Q256, Q257, Q258, Q259, Q260, Q261, Q262, Q263, Q264, Q265, Q266, Q267, Q268, Q269, Q270, Q271, Q272, Q273, Q274, Q275, Q276, Q277, Q278, Q279, Q280, Q281, Q282, Q283, Q284, Q285, Q286, Q287, Q288, Q289, Q290, Q291, Q292, Q293, Q294, Q295, Q296, Q297, Q298, Q299, Q300, Q301, Q302, Q303, Q304, Q305, Q306, Q307, Q308, Q309, Q310, Q311, Q312, Q313, Q314, Q315, Q316, Q317, Q318, Q319, Q320, Q321, Q322, Q323, Q324, Q325, Q326, Q327, Q328, Q329, Q330, Q331, Q332, Q333, Q334, Q335, Q336, Q337, Q338, Q339, Q340, Q341, Q342, Q343, Q344, Q345, Q346, Q347, Q348, Q349, Q350, Q351, Q352, Q353, Q354, Q355, Q356, Q357, Q358, Q359, Q360, Q361, Q362, Q363, Q364, Q365, Q366, Q367, Q368, Q369, Q370, Q371, Q372, Q373, Q374, Q375, Q376, Q377, Q378, Q379, Q380, Q381, Q382, Q383, Q384, Q385, Q386, Q387, Q388, Q389, Q390, Q391, Q392, Q393, Q394, Q395, Q396, Q397, Q398, Q399, Q400, Q401, Q402, Q403, Q404, Q405, Q406, Q407, Q408, Q409, Q410, Q411, Q412, Q413, Q414, Q415, Q416, Q417, Q418, Q419, Q420, Q421, Q422, Q423, Q424, Q425, Q426, Q427, Q428, Q429, Q430, Q431, Q432, Q433, Q434, Q435, Q436, Q437, Q438, Q439, Q440, Q441, Q442, Q443, Q444, Q445, Q446, Q447, Q448, Q449, Q450, Q451, Q452, Q453, Q454, Q455, Q456, Q457, Q458, Q459, Q460, Q461, Q462, Q463, Q464, Q465, Q466, Q467, Q468, Q469, Q470, Q471, Q472, Q473, Q474, Q475, Q476, Q477, Q478, Q479, Q480, Q481, Q482, Q483, Q484, Q485, Q486, Q487, Q488, Q489, Q490, Q491, Q492, Q493, Q494, Q495, Q496, Q497, Q498, Q499, Q500, Q501, Q502, Q503, Q504, Q505, Q506, Q507, Q508, Q509, Q510, Q511, Q512, Q513, Q514, Q515, Q516, Q517, Q518, Q519, Q520, Q521, Q522, Q523, Q524, Q525, Q526, Q527, Q528, Q529, Q530, Q531, Q532, Q533, Q534, Q535, Q536, Q537, Q538, Q539, Q540, Q541, Q542, Q543, Q544, Q545, Q546, Q547, Q548, Q549, Q550, Q551, Q552, Q553, Q554, Q555, Q556, Q557, Q558, Q559, Q560, Q561, Q562, Q563, Q564, Q565, Q566, Q567, Q568, Q569, Q570, Q571, Q572, Q573, Q574, Q575, Q576, Q577, Q578, Q579, Q580, Q581, Q582, Q583, Q584, Q585, Q586, Q587, Q588, Q589, Q590, Q591, Q592, Q593, Q594, Q595, Q596, Q597, Q598, Q599, Q600, Q601, Q602, Q603, Q604, Q605, Q606, Q607, Q608, Q609, Q610, Q611, Q612, Q613, Q614, Q615, Q616, Q617, Q618, Q619, Q620, Q621, Q622, Q623, Q624, Q625, Q626, Q627, Q628, Q629, Q630, Q631, Q632, Q633, Q634, Q635, Q636, Q637, Q638, Q639, Q640, Q641, Q642, Q643, Q644, Q645, Q646, Q647, Q648, Q649, Q650, Q651, Q652, Q653, Q654, Q655, Q656, Q657, Q658, Q659, Q660, Q661, Q662, Q663, Q664, Q665, Q666, Q667, Q668, Q669, Q670, Q671, Q672, Q673, Q674, Q675, Q676, Q677, Q678, Q679, Q680, Q681, Q682, Q683, Q684, Q685, Q686, Q687, Q688, Q689, Q690, Q691, Q692, Q693, Q694, Q695, Q696, Q697, Q698, Q699, Q700, Q701, Q702, Q703, Q704, Q705, Q706, Q707, Q708, Q709, Q710, Q711, Q712, Q713, Q714, Q715, Q716, Q717, Q718, Q719, Q720, Q721, Q722, Q723, Q724, Q725, Q726, Q727, Q728, Q729, Q730, Q731, Q732, Q733, Q734, Q735, Q736, Q737, Q738, Q739, Q740, Q741, Q742, Q743, Q744, Q745, Q746, Q747, Q748, Q749, Q750, Q751, Q752, Q753, Q754, Q755, Q756, Q757, Q758, Q759, Q760, Q761, Q762, Q763, Q764, Q765, Q766, Q767, Q768, Q769, Q770, Q771, Q772, Q773, Q774, Q775, Q776, Q777, Q778, Q779, Q780, Q781, Q782, Q783, Q784, Q785, Q786, Q787, Q788, Q789, Q790, Q791, Q792, Q793, Q794, Q795, Q796, Q797, Q798, Q799, Q800, Q801, Q802, Q803, Q804, Q805, Q806, Q807, Q808, Q809, Q810, Q811, Q812, Q813, Q814, Q815, Q816, Q817, Q818, Q819, Q820, Q821, Q822, Q823, Q824, Q825, Q826, Q827, Q828, Q829, Q830, Q831, Q832, Q833, Q834, Q835, Q836, Q837, Q838, Q839, Q840, Q841, Q842, Q843, Q844, Q845, Q846, Q847, Q848, Q849, Q850, Q851, Q852, Q853, Q854, Q855, Q856, Q857, Q858, Q859, Q860, Q861, Q862, Q863, Q864, Q865, Q866, Q867, Q868, Q869, Q870, Q871, Q872, Q873, Q874, Q875, Q876, Q877, Q878, Q879, Q880, Q881, Q882, Q883, Q884, Q885, Q886, Q887, Q888, Q889, Q890, Q891, Q892, Q893, Q894, Q895, Q896, Q897, Q898, Q899, Q900, Q901, Q902, Q903, Q904, Q905, Q906, Q907, Q908, Q909, Q910, Q911,

DESCRIPTION OF SCHEMATIC DIAGRAM

NOTES:

1. The unit of resistance "ohm" is omitted.
($K=k\Omega=1000\Omega$, $M=M\Omega$)
2. All resistors are 1/8 watt, unless otherwise noted.
3. All capacitors are μF , unless otherwise noted.
($P=pF=\mu\mu F$)
4. (G) indicates $\pm 2\%$ tolerance may be used.
5. $\overline{\text{---}}$ indicates line isolated ground.

VOLTAGE MEASUREMENT CONDITIONS:

1. All DC voltages are measured with DVM connected between points indicated and chassis ground, line voltage set at 120V AC and all controls set for normal picture unless otherwise indicated.
2. All voltages measured with 1000 μ V B & W or Color signal.

WAVEFORM MEASUREMENT CONDITIONS:

1. Photographs taken on a standard gated color bar signal, the tint setting adjusted for proper color. The wave shapes at the red, green and blue cathodes of the picture tube depend on the tint, color level and picture control.
2. \bigcirc indicates waveform check points (See chart, waveforms are measured from point indicated to chassis ground.)

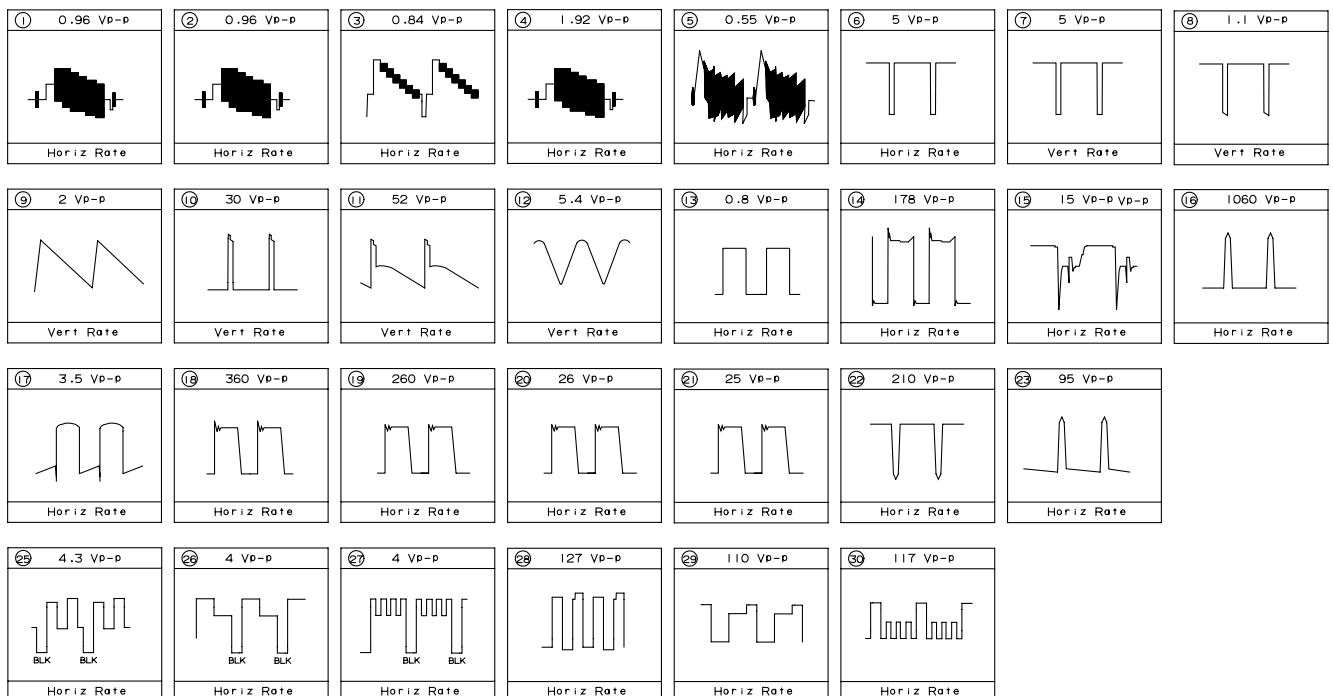
\triangle AND SHADED () COMPONENTS = SAFETY RELATED PARTS.

\blacktriangle MARK= X-RAY RELATED PARTS.

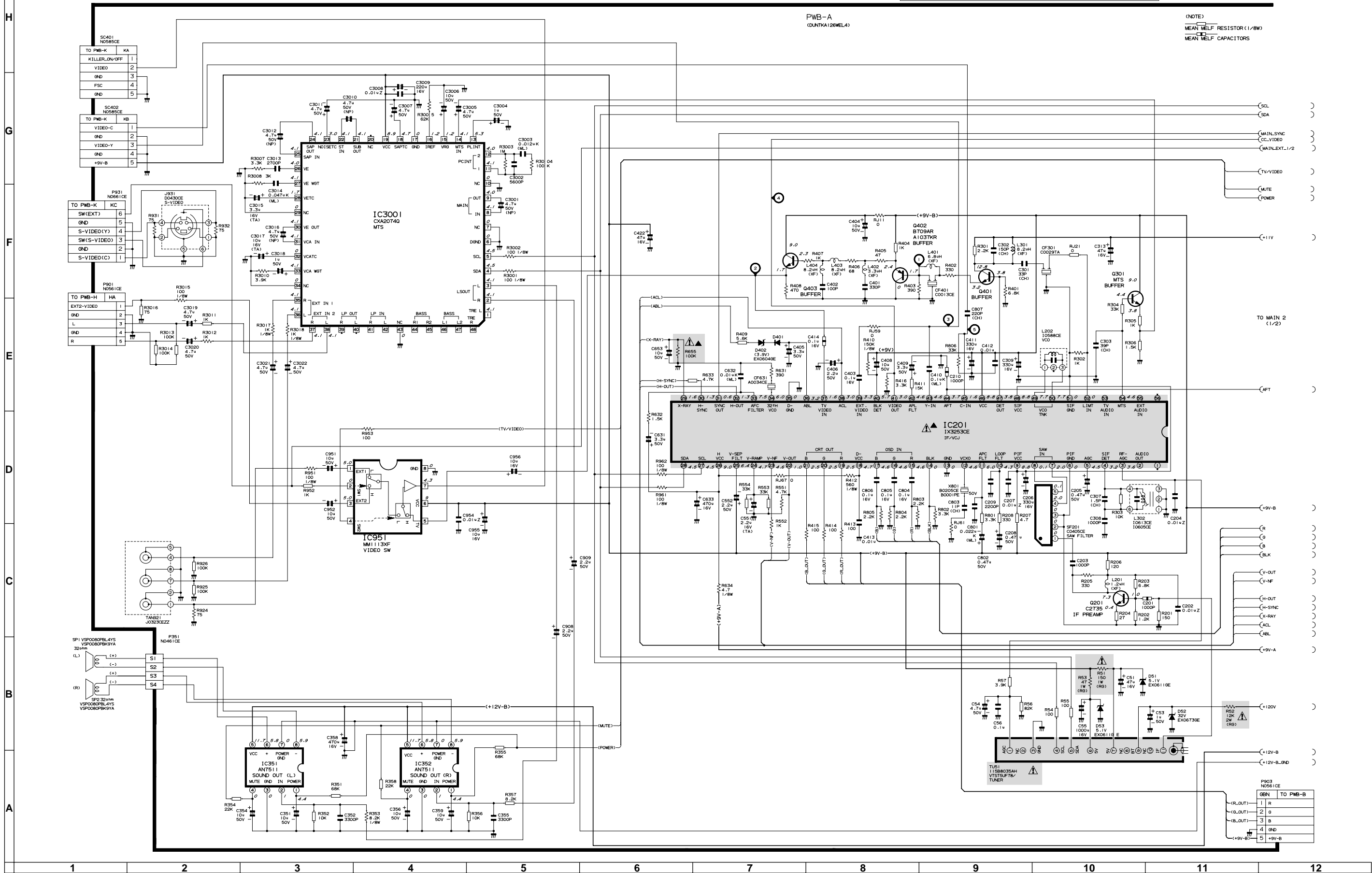
DRGANNES MARQUES \triangle ET HACHRES ():
PIECES RELATIVES A LA SECURITE.
MARQUE \blacktriangle : PIECES RELATIVE AUX RAYONS X.

This circuit diagram is a standard one, printed circuits may be subject to change for product improvement without prior notice.

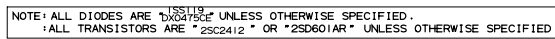
WAVE FORMS



SCHEMATIC DIAGRAM: MAIN-1 Unit



	A	B	C	D	E	F	G	H
--	---	---	---	---	---	---	---	---



	A
	B
	C
	D
	E
	F
	G
	H

SCHEMATIC DIAGRAM: S-VIDEO Unit

H

G

F

E

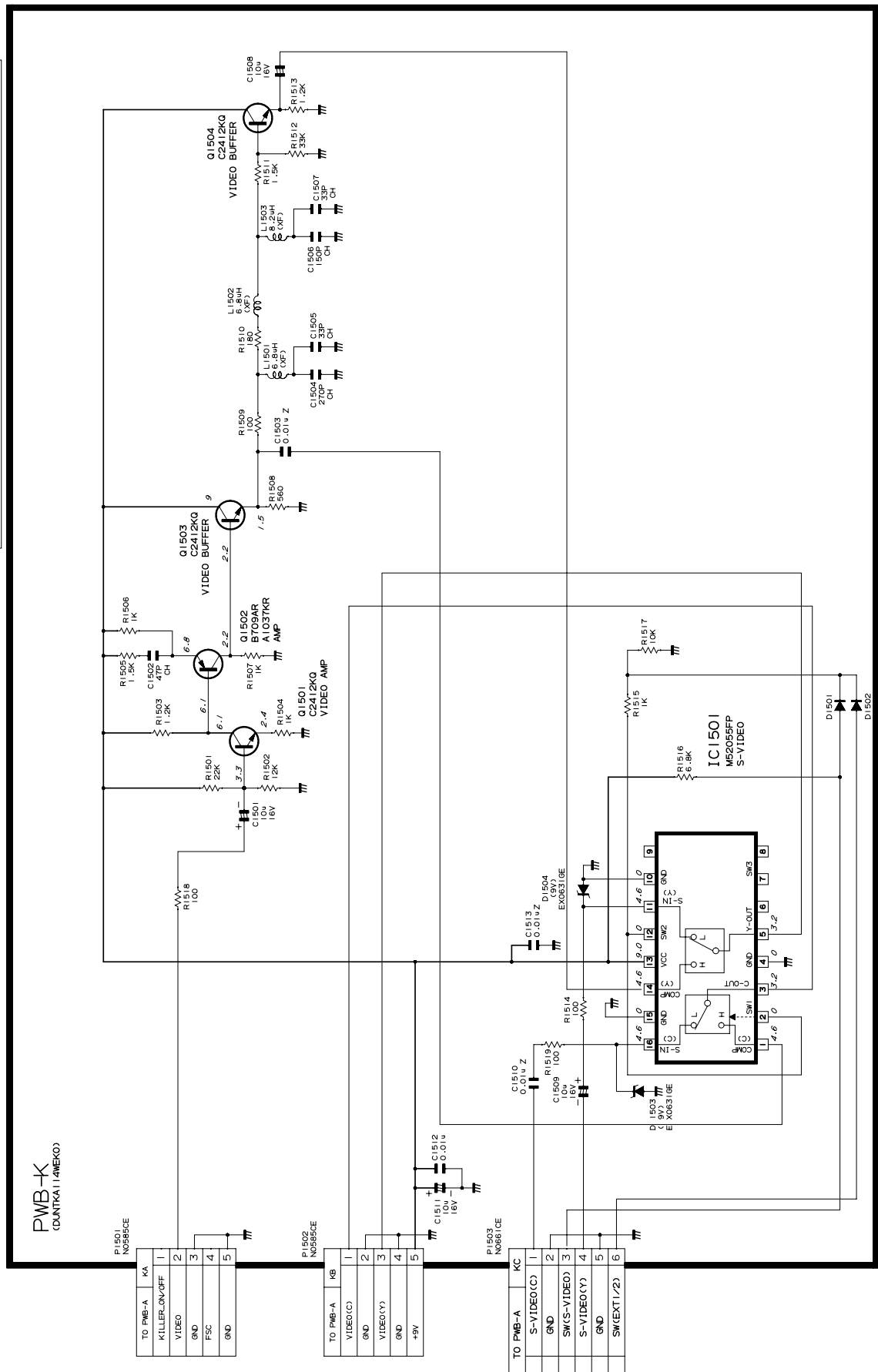
D

C

B

A

NOTE: ALL DIODES ARE "55119" UNLESS OTHERWISE SPECIFIED.
ALL TRANSISTORS ARE "252412" OR "252601AR" UNLESS OTHERWISE SPECIFIED.



1

2

3

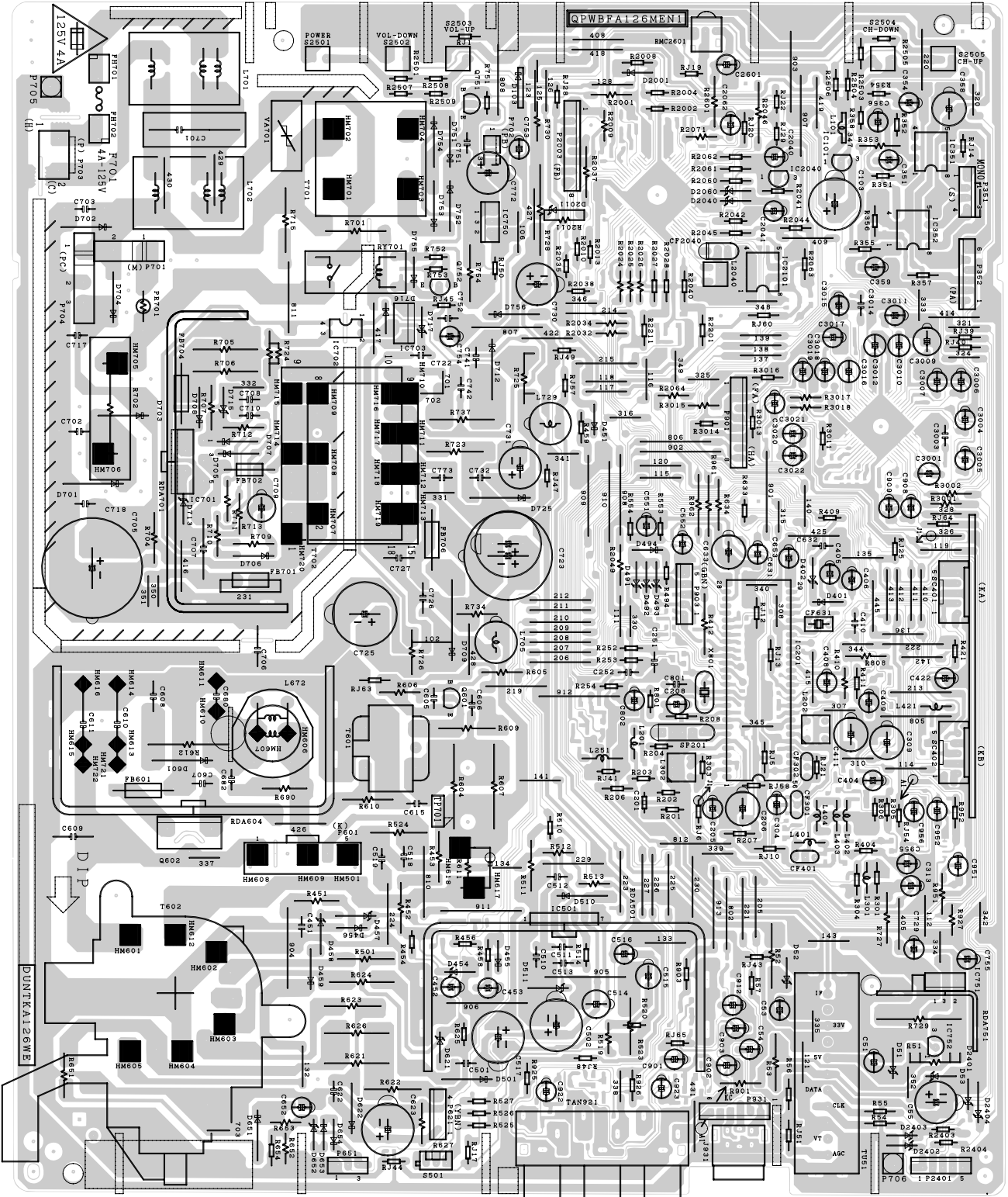
4

5

6

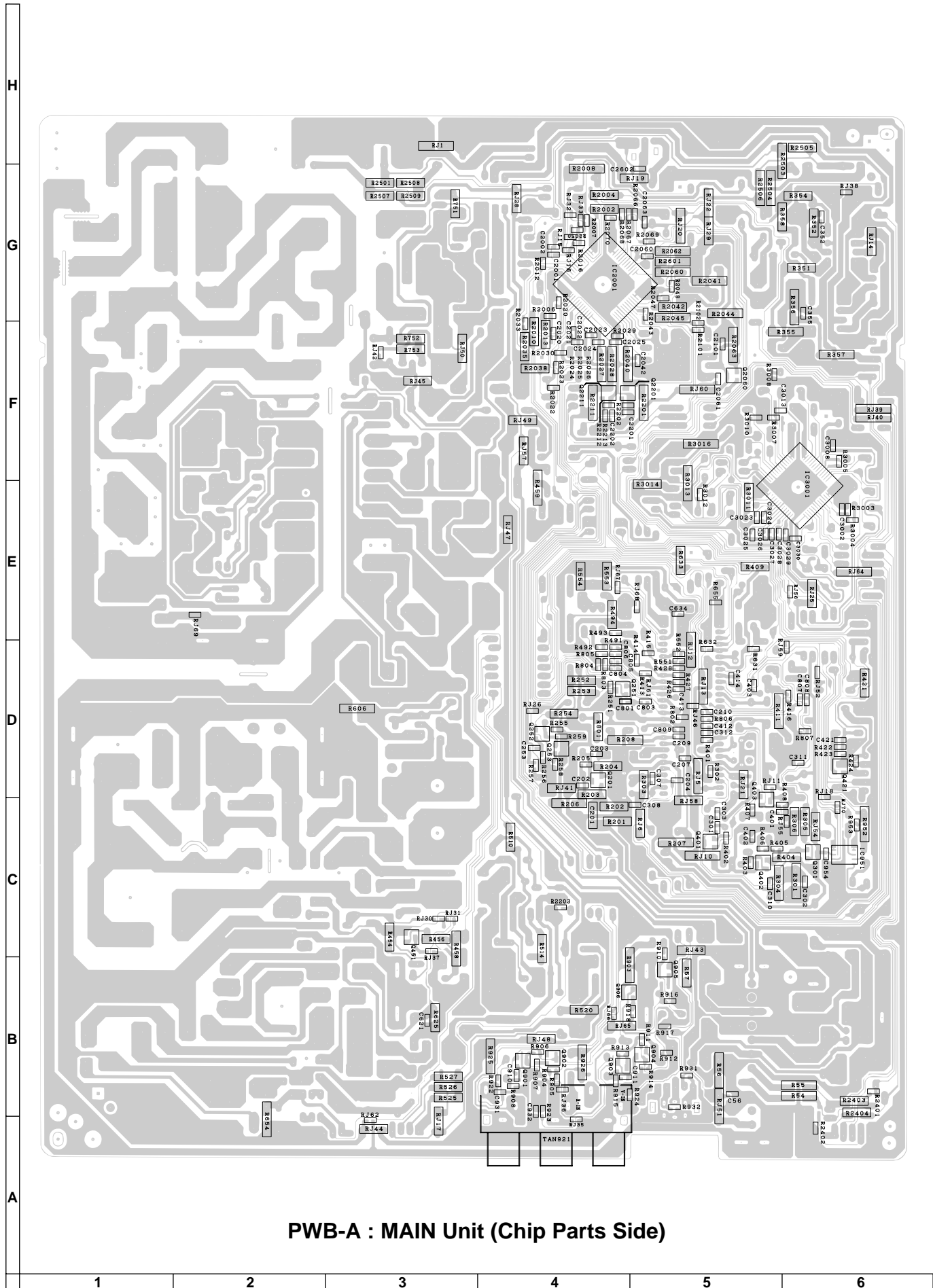
PRINTED WIRING BOARD ASSEMBLIES

H
G
F
E
D
C
B
A



PWB-A : MAIN Unit (Wiring Side)

1 2 3 4 5 6





D



B



1

PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual; electrical components having such features are identified by Δ and shaded areas in the Replacement Parts Lists and Schematic Diagrams. The use of a substitute replacement part which does not have the same safety characteristic as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

- | | |
|-----------------|----------------|
| 1. MODEL NUMBER | 2. REF. NO. |
| 3. PART NO. | 4. DESCRIPTION |

in **USA**: Contact your nearest HITACHI Parts Distributor to order.
For location of HITACHI Parts Distributor, Please call Toll-Free; 1-800-HITACHI

Δ MARK: X- RAY RELATED PARTS

Ref. No.	Part No.	Description
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PICTURE TUBE

Δ V101	VB68AJB82071E	Picture Tube (I.T.C.)
Δ L703	RCiLG0054MEZZ	Degaussing Coil
	MSPRT0002MEZZ	Spring for CRT
	QEARC2702MEZZ	Grounding Part

PRINTED WIRING BOARD ASSEMBLIES (NOT REPLACEMENT ITEM)

PWB-A DUNTKA126WEL4	MAIN Unit
PWB-B DUNTK9510WEK1	CRT Unit
PWB-H DUNTK9310WEK1	FRONT AV Unit
PWB-K DUNTKA114WEK0	S-VIDEO Unit

LISTE DES PIECES

CHANGE DES PIECES

Les pièces de rechange qui présentent ces caractéristiques spéciales de sécurité, sont identifiées dans ce manuel : les pièces électriques qui présentent ces particularités, sont repérées par la marque Δ et sont hachurées dans les listes de pièces et dans les diagrammes schématisés.
La substitution d'une pièce de rechange par une autre qui ne présente pas les mêmes caractéristiques de sécurité que la pièce recommandée par l'usine et dans ce manuel de service, peut provoquer une électrocution, un incendie ou tout autre sinistre.

"COMMENT COMMANDER LES PIECES DE RECHANGE"

Pour que votre commande soit rapidement et correctement remplie, veuillez fournir les renseignements suivants.

- | | |
|---------------------|----------------|
| 1. NUMERO DU MODELE | 2. NO. DE REF |
| 3. NO. DE PIECE | 4. DESCRIPTION |

in **CANADA**: Phone 1-800-HITACHI
1-800-448-2244

Δ MARQUE: PIECES RELATIVE AUX RAYONS X

Ref. No.	Part No.	Description
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PWB-A: DUNTKA126WEL4 MAIN UNIT

TUNER

**NOTE: THE PARTS HERES SHOWN ARE SUPPLIED
AS AN ASSEMBLY BUT NOT INDEPENDENTLY.**

Δ TU51	VTUVTST5UF78S	Tuner
	or	
	VTU115B8035AH	

INTEGRATED CIRCUITS

IC101	VHiKA78S05P-1	KA78S05P
Δ IC201	RH-iX3253CEZZ	TA1268AN
IC351	VHiAN7511/-1	I.C.
IC352	VHiAN7511/-1	I.C.
Δ IC501	VHiTA8427K/-1	TA8427K
Δ IC701	VHiSTRF66261E	STR-F6626
Δ IC702	RH-FX0034CEZZ	PC817
	or	
	RH-FX0002GEZZ	
Δ IC703	VHiSE120N/-1	SE120N
Δ IC750	VHiKA7809Pi-1	KA7809PI
Δ IC751	VHiKA7809Pi-1	KA7809PI
IC951	VHiMM1113XF1E	MM1113XFBE
IC2001	RH-iX3436CEZZ	TMPA8700CPF-164
IC2040	VHiKA7045A-1	KIA7045A
IC2101	VHiM24C16B/-1	M24C16-BN6
IC3001	VHiXA2074Q-1	CXA2074Q

TRANSISTORS

You can substitute "VS2SC2412-C-1" for "VS2SD601AR/-1".

Q201	VS2SC2735//1E	2SC2735
Q301	VS2SD601AR/-1	2SD601AR
Q401	VS2SD601AR/-1	2SD601AR
Q402	VS2SB709AR/-1	2SB709AR
	or	
	VS2SA1037KR-1	
Q403	VS2SD601AR/-1	2SD601AR

Ref. No.	Part No.	Description
PWB-A: DUNTKA126WEL4		
MAIN UNIT (Continued)		
Q451	VS2SB709AR/-1 or VS2SA1037KQ-1	2SB709AR
Q601	VS2SC2482//1	2SC2482
△ Q602	VS2SD2539//1E	2SD2539
Q751	VS2SC3198-Y-1	2SC3198(Y)
Q2060	VS2SD601AR/-1	2SD601AR
Q2201	VS2SD601AR/-1	2SD601AR
Q2211	VS2SD601AR/-1	2SD601AR
DIODES		
You can substitute "RH-DX0475CEZZ" for "VHD1SS119//1".		
D51	RH-EX0611GEZZ	Zener Diode, 5.1V
D52	RH-EX0673GEZZ	Zener Diode, 32V
D53	RH-EX0611GEZZ	Zener Diode, 5.1V
D103	VHD1SS119//1	Diode
D401	VHD1SS119//1	Diode
D402	RH-EX0604GEZZ	Zener Diode, 3.9V
D454	RH-EX0611GEZZ	Zener Diode, 5.1V
D455	VHD1SS119//1	Diode
D456	VHD1SS119//1	Diode
D457	RH-EX0217CEZZ	Zener Diode
D458	RH-EX0217CEZZ	Zener Diode
D459	VHD1SS119//1	Diode
△ D501	RH-DX0131CEZZ	Diode
△ D510	RH-DX0441CEZZ	Diode
D621	RH-EX0631GEZZ	Zener Diode, 9.1V
△ D622	RH-DX0131CEZZ	Diode
△ D651	RH-DX0131CEZZ	Diode
△△ D652	RH-EX1313CEZZ	Zener Diode, 9.1V
△△ D653	VHD1SS119//1	Diode
△△ D654	VHD1SS119//1	Diode
△ D701	RH-DX0154CEZZ	Diode
△ D702	RH-DX0154CEZZ	Diode
△ D703	RH-DX0154CEZZ	Diode
△ D704	RH-DX0154CEZZ	Diode
D705	VHD1SS82///1A	Diode
D706	RH-DX0066GEZZ	Diode
D707	VHD1SS82///1A	Diode
D708	RH-DX0066GEZZ	Diode
△ D709	RH-DX0229CEZZ	Diode
△ D712	RH-DX0407CEZZ	Diode
△ D713	RH-EX0673GEZZ	Zener Diode, 32V
△ D715	RH-EX0610GEZZ	Zener Diode
D716	VHD1SS119//1	Diode
D717	RH-EX0650GEZZ	Zener Diode, 16V
△ D725	RH-DX0407CEZZ	Diode
△ D751	RH-DX0441CEZZ	Diode
△ D752	RH-DX0441CEZZ	Diode
△ D753	RH-DX0441CEZZ	Diode
△ D754	RH-DX0441CEZZ	Diode
D755	VHD1SS119//1	Diode
△ D756	RH-DX0441CEZZ	Diode
D2001	VHD1SS119//1	Diode
D2011	RH-EX0611GEZZ	Zener Diode, 5.1V
PACKAGED CITCUITS		
△ PR701	RMPTP0092CEZZ	Packaged Circuit
X801	RCRSB0205CEZZ or RCRSB0001PEZZ	Crystal
FILTERS		
CF301	RFiLC0029TAZZ	Ceramic Filter
CF401	RFiLC0013CEZZ	Ceramic Filter
CF631	RFiLA0034CEZZ	Ceramic Filter
CF2040	RFiLC0121GEZZ or RFiLA0099CEZZ	Ceramic Filter
SF201	RFiLC0405CEZZ	SAW Filter

Ref. No.	Part No.	Description
COILS		
L201	VP-XF1R2K0000	Peaking 1.2μH
L202	RCiLi0588CEZZ	VCO Coil
L301	VP-XF8R2K0000	Peaking 8.2μH
L302	RCiLi0613CEZZ or RCiLi0605CEZZ	IF Coil
L401	VP-XF6R8K0000	Peaking 6.8μH
L402	VP-XF3R3K0000	Peaking 3.3μH
L403	VP-XF8R2K0000	Peaking 8.2μH
L404	VP-XF8R2K0000	Peaking 8.2μH
L672	RCiLZ0101MEZZ or RCiLZ0102MEZZ	Coil
△ L701	RCiLF0025PEZZ	Coil
△ L702	RCiLF0025PEZZ	Coil
△ L705	RCiLP0179CEZZ	Coil
L729	RCiLP0179CEZZ	Coil
L2040	RCiLB0131CEZZ	Oscillation Coil
TRANSFORMERS		
T601	RTRNZ0057PEZZ	Transformer
△△ T602	RTRNF0033MEZZ or RTRNF0037MEZZ	H-Volt Transformer
△ T701	RTRNP0543CEZZ	Power Transformer
△ T702	RTRNZ0017MEZZ or RTRNZ0022MEZZ	Transformer
CAPACITORS		
[EL... Electrolytic, M-Poly... Metalized Polypro Film]		
C51	VCEA0A1CW476M	47 16V EL.
C53	VCEA0A1HW105M	1 50V EL.
C54	VCEA0A1HW475M	4.7 50V EL.
C55	VCEA0A1CW108M	1000 16V EL.
C56	VCKYCY1CB104K	0.1 16V Ceramic
C103	VCEA0A1CW228M	2200 16V EL.
C201	VCKYMN1HB102K	1000p 50V Ceramic
C202	VCKYCY1HF103Z	0.01 50V Ceramic
C203	VCKYCY1HB102K	1000p 50V Ceramic
C204	VCKYCY1HF103Z	0.01 50V Ceramic
C205	VCEA0A1HW474M	0.47 50V EL.
C206	VCEA0A1CW337M	330 16V EL.
C207	VCKYCY1HF103Z	0.01 50V Ceramic
C208	VCEA0A1HW474M	0.47 50V EL.
C209	VCKYCY1HB222K	2200p 50V Ceramic
C210	VCKYCY1HB102K	1000p 50V Ceramic
C301	VCCCCY1HH330J	33p 50V Ceramic
C302	VCCCCY1HH151J	150p 50V Ceramic
C303	VCCCCY1HH390J	39p 50V Ceramic
C307	VCCCCY1HH1R5C	1.5p 50V Ceramic
C308	VCKYCY1HB102K	1000p 50V Ceramic
C309	VCEA0A1CW337M	330 16V EL.
C313	VCEA0A1CW476M	47 16V EL.
C351	VCEA0A1HW106M	10 50V EL.
C352	VCKYCY1HB332K	3300p 50V Ceramic
C354	VCEA0A1HW106M	10 50V EL.
C355	VCKYCY1HB332K	3300p 50V Ceramic
C356	VCEA0A1HW106M	10 50V EL.
C358	VCEA0A1CW477M	470 16V EL.
C359	VCEA0A1HW106M	10 50V EL.
C401	VCKYCY1HB331K	330p 50V Ceramic
C402	VCCCCY1HH101J	100p 50V Ceramic
C403	VCKYCY1CB104K	0.1 16V Ceramic
C404	VCEA0A1HW106M	10 50V EL.
C405	VCEA0A1HW335M	3.3 50V EL.
C406	VCEA0A1HW225M	2.2 50V EL.
C408	VCEA0A1HW106M	10 50V EL.
C409	VCEA0A1HW335M	3.3 50V EL.
C410	VCQYTA1HM104K	0.1 50V Mylar
C411	VCEA0A1CW337M	330 16V EL.
C412	VCKYCY1HB103K	0.01 50V Ceramic
C413	VCKYCY1HB103K	0.01 50V Ceramic
C414	VCKYCY1CB104K	0.1 16V Ceramic

Ref. No.	Part No.	Description			Ref. No.	Part No.	Description		
PWB-A: DUNTKA126WEL4					C807	VCCCCY1HH221J	220p	50V	Ceramic
MAIN UNIT (Continued)					C908	VCEA0A1HW225M	2.2	50V	EL.
C422	VCEA0A1CW476M	47	16V	EL.	C909	VCEA0A1HW225M	2.2	50V	EL.
C451	VCQYTA1HM104K	0.1	50V	Mylar	C951	VCEA0A1HW106M	10	50V	EL.
C452	VCEA0A1HW475M	4.7	50V	EL.	C952	VCEA0A1HW106M	10	50V	EL.
C453	VCEA0A1CW226M	22	16V	EL.	C954	VCKYCY1HF103Z	0.01	50V	Ceramic
C501	VCKYPA2HB102K	1000p	500V	Ceramic	C955	VCEA0A1CW106M	10	16V	EL.
C502	VCEA0A1VW108M	1000	35V	EL.	C956	VCEA0A1CW106M	10	16V	EL.
C510	VCFYSA1JB564J	0.56	63V	Mylar	C2001	VCCCCY1HH101J	100p	50V	Ceramic
C511	VCKYPA2HB391K	390p	500V	Ceramic	C2002	VCCCCY1HH101J	100p	50V	Ceramic
C512	VCQYTA1HM473K	0.047	50V	Mylar	C2040	VCEA0A1AW107M	100	10V	EL.
C513	VCQYTA1HM103K	0.01	50V	Mylar	C2041	VCEA0A1HW105M	1	50V	EL.
C514	VCEA0A1VW107M	100	35V	EL.	C2060	VCKYCY1CB104K	0.1	16V	Ceramic
C515	VCEA0A1HW474M	0.47	50V	EL.	C2061	VCCCCY1HH101J	100p	50V	Ceramic
C516	VCSATA1VE684K	0.68	35V	Tantalum	C2062	VCEA0A1HW107M	100	10V	EL.
C517	VCEA0A1VW108M	1000	35V	EL.	C2201	VCKYCY1HB152K	1500p	50V	Ceramic
C518	VCFYSA1JB473J	0.047	63V	Mylar	C2202	VCCCCY1HH390J	39p	50V	Ceramic
C551	VCSATA1CE225K	2.2	16V	Tantalum	C2601	VCEA0A1HW475M	4.7	50V	EL.
C552	VCEA0A1HW225M	2.2	50V	EL.	C2602	VCCCCY1HH101J	100p	50V	Ceramic
C606	VCKYPA2HB561K	560p	500V	Ceramic	C3001	VCE9GA1HW475M	4.7	50V	EL.(N.P)
C607	VCKYPA1HB472K	4700p	50V	Ceramic	C3002	VCKYCY1HB562K	5600p	50V	Ceramic
▲▲ C610	VCFPVC3CA772H	7700p	1.6kV	M-Poly.	C3003	VCQYTA1HM123K	0.012	50V	Mylar
▲▲ C611	VCFPVC3CA722H	7200p	1.6kV	M-Poly.	C3004	VCEA0A1HW105M	1	50V	EL.
C615	VCKYPA2HB102K	1000p	500V	Ceramic	C3005	VCEA0A1HW475M	4.7	50V	EL.
△ C623	VCEA4A2EN106M	10	250V	EL.	C3006	VCEA0A1HW106M	10	50V	EL.
C631	VCEA0A1HW335M	3.3	50V	EL.	C3007	VCEA0A1HW475M	4.7	50V	EL.
C632	VCQYTA1HM103K	0.01	50V	Mylar	C3008	VCKYCY1HF103Z	0.01	50V	Ceramic
C633	VCEA0A1CW477M	470	16V	EL.	C3009	VCEA0A1CW227M	220	16V	EL.
C652	VCEA0A1HW106M	10	50V	EL.	C3010	VCE9GA1HW475M	4.7	50V	EL.(N.P)
C653	VCEA0A1HW106M	10	50V	EL.	C3011	VCEA0A1HW475M	4.7	50V	EL.
C680	VCFPVC2DB474J	0.47	200V	M-Poly.	C3012	VCE9GA1HW475M	4.7	50V	EL.(N.P)
C682	VCKYPA2HB331K	330p	500V	Ceramic	C3013	VCKYCY1HB272K	2700p	50V	Ceramic
△ C701	RC-FZ012SCEZZ	0.22	AC250V	Plastic	C3014	VCQYTA1HM473K	0.047	50V	Mylar
	or				C3015	VCSATA1CE335K	3.3	16V	Tantalum
	RC-FZ012SGEZZ				C3016	VCE9GA1HW475M	4.7	50V	EL.(N.P)
	or				C3017	VCSATA1CE106K	10	16V	Tantalum
	RC-FZ037SCEZZ				C3018	VCEA0A1HW105M	1	50V	EL.
	or				C3019	VCEA0A1HW475M	4.7	50V	EL.
	RC-FZ017SCEZZ				C3020	VCEA0A1HW475M	4.7	50V	EL.
C702	RC-KZ0029CEZZ	0.01	AC250V	Ceramic	C3021	VCEA0A1HW475M	4.7	50V	EL.
C703	RC-KZ0029CEZZ	0.01	AC250V	Ceramic	C3022	VCEA0A1HW475M	4.7	50V	EL.
△ C705	RC-EZ0800CEZZ	560	200V	EL.	RESISTORS				
	or				[M-Ox... Metal Oxide, M-Film... Metal Film]				
	RC-EZ0719CEZZ				RJ1	VRD-MN2BE000J	0	1/8W	Carbon
	or				RJ10	VRD-MN2BE000J	0	1/8W	Carbon
	RC-EZ1336CEZZ				RJ11	VRS-CY1JF000J	0	1/16W	M-Ox.
△ C706	RC-KZ0092GEZZ	0.0033	AC250V	Ceramic	RJ12	VRD-MN2BE000J	0	1/8W	Carbon
C707	VCFPVC3CA222H	2200p	1.6kV	M-Poly.	RJ13	VRD-MN2BE000J	0	1/8W	Carbon
C708	VCCSPA1HL471J	470p	50V	Ceramic	RJ14	VRD-MN2BE000J	0	1/8W	Carbon
C709	VCEA0A1VW107M	100	35V	EL.	RJ15	VRS-CY1JF000J	0	1/16W	M-Ox.
C710	VCQYTA1HM102J	1000p	50V	Mylar	RJ17	VRD-MN2BE000J	0	1/8W	Carbon
C717	VCKYPA2HB472K	4700p	500V	Ceramic	RJ19	VRD-MN2BE000J	0	1/8W	Carbon
C718	VCKYPA2HB472K	4700p	500V	Ceramic	RJ20	VRD-MN2BE000J	0	1/8W	Carbon
C722	VCQYTA1HM104K	0.1	50V	Mylar	RJ21	VRD-MN2BE000J	0	1/8W	Carbon
△ C723	RC-EZ0724CEZZ	100	160V	EL.	RJ22	VRD-MN2BE000J	0	1/8W	Carbon
△ C725	RC-EZ0809CEZZ	220	160V	EL.	RJ25	VRD-MN2BE000J	0	1/8W	Carbon
C726	RC-KZ0338CEZZ	560p	2kV	Ceramic	RJ26	VRS-CY1JF000J	0	1/16W	M-Ox.
C727	RC-KZ0338CEZZ	560p	2kV	Ceramic	RJ28	VRD-MN2BE000J	0	1/8W	Carbon
C729	VCEA0A1CW106M	10	16V	EL.	RJ29	VRD-MN2BE000J	0	1/8W	Carbon
△ C730	RC-EZ0385CEZZ	1000	16V	EL.	RJ30	VRS-CY1JF000J	0	1/16W	M-Ox.
△ C731	RC-EZ0385CEZZ	1000	16V	EL.	RJ31	VRS-CY1JF000J	0	1/16W	M-Ox.
C732	VCKYPA2HB102K	1000p	500V	Ceramic	RJ32	VRS-CY1JF000J	0	1/16W	M-Ox.
C741	VCKYPA2HB102K	1000p	500V	Ceramic	RJ33	VRS-CY1JF000J	0	1/16W	M-Ox.
C742	VCKYPA2HB102K	1000p	500V	Ceramic	RJ35	VRS-CY1JF000J	0	1/16W	M-Ox.
C753	VCEA0A1CW107M	100	16V	EL.	RJ36	VRS-CY1JF000J	0	1/16W	M-Ox.
C755	VCEA0A1CW476M	47	16V	EL.	RJ37	VRS-CY1JF000J	0	1/16W	M-Ox.
C772	VCEA0A1VW477M	470	35V	EL.	RJ38	VRS-CY1JF000J	0	1/16W	M-Ox.
C801	VCQYTA1HM223K	0.022	50V	Mylar	RJ39	VRD-MN2BE000J	0	1/8W	Carbon
C802	VCEA0A1HW474M	0.47	50V	EL.	RJ40	VRD-MN2BE000J	0	1/8W	Carbon
C803	VCCCCY1HH110J	11p	50V	Ceramic	RJ41	VRD-MN2BE000J	0	1/8W	Carbon
C804	VCKYCY1CB104K	0.1	16V	Ceramic	RJ42	VRS-CY1JF000J	0	1/16W	M-Ox.
C805	VCKYCY1CB104K	0.1	16V	Ceramic	RJ43	VRD-MN2BE000J	0	1/8W	Carbon
C806	VCKYCY1CB104K	0.1	16V	Ceramic	RJ46	VRS-CY1JF000J	0	1/16W	M-Ox.
					RJ48	VRD-MN2BE000J	0	1/8W	Carbon

Ref. No.	Part No.	Description	Ref. No.	Part No.	Description
PWB-A: DUNTKA126WEL4					
MAIN UNIT (Continued)					
RJ49	VRD-MN2BE000J	0 1/8W Carbon	R520	VRD-MN2BE184J	180k 1/8W Carbon
RJ50	VRD-MN2BE000J	0 1/8W Carbon	R523	VRN-RL3AB1R0J	1 1W M-Film
RJ51	VRD-MN2BE000J	0 1/8W Carbon	△ R524	VRS-RG3AB391J	390 1W M-Ox.
RJ54	VRD-MN2BE000J	0 1/8W Carbon	R526	VRD-MN2BE562J	5.6k 1/8W Carbon
RJ55	VRS-CY1JF000J	0 1/16W M-Ox.	R551	VRS-CY1JF472J	4.7k 1/16W M-Ox.
RJ56	VRS-CY1JF000J	0 1/16W M-Ox.	R552	VRS-CY1JF102J	1k 1/16W M-Ox.
RJ57	VRD-MN2BE000J	0 1/8W Carbon	R553	VRD-MN2BE333J	33k 1/8W Carbon
RJ58	VRD-MN2BE000J	0 1/8W Carbon	R554	VRD-MN2BE333J	33k 1/8W Carbon
RJ59	VRS-CY1JF000J	0 1/16W M-Ox.	△ R604	VRS-RG3LB392J	3.9k 3W M-Ox.
RJ60	VRD-MN2BE000J	0 1/8W Carbon	R605	VRD-RA2BE331J	330 1/8W Carbon
RJ61	VRS-CY1JF000J	0 1/16W M-Ox.	R606	VRD-RA2BE331J	330 1/8W Carbon
RJ63	VRD-MN2BE000J	0 1/8W Carbon	△ R607	VRS-RG3LB392J	3.9k 3W M-Ox.
RJ64	VRD-MN2BE000J	0 1/8W Carbon	△ R609	VRS-RG3AB562J	5.6k 1W M-Ox.
RJ67	VRS-CY1JF000J	0 1/16W M-Ox.	R610	VRD-RM2HD220J	22 1/2W Carbon
△ R51	VRS-RG3AB151J	150 1W M-Ox.	△ R611	VRS-KA3NG3R3K	3.3 7W M-Ox.
△ R52	VRS-RG3DB123J	12k 2W M-Ox.	△ R621	VRN-RL3AB3R9J	3.9 1W M-Film
△ R53	VRS-RG3AB470J	47 1W M-Ox.	△ R622	VRN-RL3AB1R0J	1 1W M-Film
R54	VRD-MN2BE101J	100 1/8W Carbon	△ R623	VRN-RL3AB2R7J	2.7 1W M-Film
R55	VRD-MN2BE101J	100 1/8W Carbon	△ R624	VRS-RG3DB332J	3.3k 2W M-Ox.
R56	VRD-MN2BE823J	82k 1/8W Carbon	R625	VRD-MN2BE102J	1k 1/8W Carbon
R57	VRD-MN2BE392J	3.9k 1/8W Carbon	R627	VRD-RM2HD224J	220k 1/2W Carbon
R201	VRD-MN2BE151J	150 1/8W Carbon	R631	VRS-CY1JF391J	390 1/16W M-Ox.
R202	VRD-MN2BE122J	1.2k 1/8W Carbon	R632	VRS-CY1JF152J	1.5k 1/16W M-Ox.
R203	VRD-MN2BE682J	6.8k 1/8W Carbon	R633	VRD-MN2BE472J	4.7k 1/8W Carbon
R204	VRD-MN2BE270J	27 1/8W Carbon	R634	VRD-RA2BE4R7J	4.7 1/8W Carbon
R205	VRS-CY1JF331J	330 1/16W M-Ox.	▲▲ R651	VRS-RG2HC270J	27 1/2W M-Ox.
R206	VRD-MN2BE121J	120 1/8W Carbon	▲▲ R652	VRN-RA2BK103F	10k 1/8W M-Film
R207	VRD-MN2BE4R7J	4.7 1/8W Carbon	▲▲ R653	VRN-RA2BK822F	8.2k 1/8W M-Film
R208	VRD-MN2BE331J	330 1/8W Carbon	▲▲ R654	VRD-MN2BE184J	180k 1/8W Carbon
R301	VRD-MN2BE222J	2.2k 1/8W Carbon	▲▲ R655	VRS-CY1JF104J	100k 1/16W M-Ox.
R302	VRS-CY1JF102J	1k 1/16W M-Ox.	R690	VRS-RG2HC102J	1k 1/2W M-Ox.
R303	VRD-MN2BE103J	10k 1/8W Carbon	△ R701	RR-HZ0048CEZZ	3.9M 1/2W Solid
R304	VRD-MN2BE333J	33k 1/8W Carbon	△ R702	VRW-KQ3NC1R2K	1.2 7W Cement
R305	VRD-MN2BE102J	1k 1/8W Carbon	R704	VRD-RM2HD154J	150k 1/2W Carbon
R306	VRD-MN2BE152J	1.5k 1/8W Carbon	△ R705	VRN-RL3DBR22J	0.22 2W M-Film
R351	VRD-MN2BE683J	68k 1/8W Carbon	△ R706	VRN-RL3DBR27J	0.27 2W M-Film
R352	VRD-MN2BE103J	10k 1/8W Carbon	R707	VRS-RG2HC681J	680 1/2W M-Ox.
R353	VRD-RA2BE822J	8.2k 1/8W Carbon	△ R709	VRN-GA2EB1R0J	1 1/4W M-Film
R354	VRD-MN2BE223J	22k 1/8W Carbon	R710	VRD-RM2HD470J	47 1/2W Carbon
R355	VRD-MN2BE683J	68k 1/8W Carbon	R711	VRD-RA2BE242J	2.4k 1/8W Carbon
R356	VRD-MN2BE103J	10k 1/8W Carbon	△ R715	VRS-RG3DB153J	15k 2W M-Ox.
R357	VRD-MN2BE822J	8.2k 1/8W Carbon	△ R723	VRN-RL3DBR39J	0.39 2W M-Film
R358	VRD-MN2BE223J	22k 1/8W Carbon	R724	VRS-RG2HC332J	3.3k 1/2W M-Ox.
R401	VRS-CY1JF682J	6.8k 1/16W M-Ox.	R725	VRS-RG2HC821J	820 1/2W M-Ox.
R402	VRS-CY1JF331J	330 1/16W M-Ox.	R726	VRS-RG2HC122J	1.2k 1/2W M-Ox.
R403	VRS-CY1JF391J	390 1/16W M-Ox.	R727	VRD-RA2BE271J	270 1/8W Carbon
R404	VRD-MN2BE102J	1k 1/8W Carbon	△ R728	VRN-RL3LB4R7J	4.7 3W M-Film
R405	VRS-CY1JF470J	47 1/16W M-Ox.	R734	VRD-RM2HD124J	120k 1/2W Carbon
R406	VRS-CY1JF680J	68 1/16W M-Ox.	△ R737	VRN-RL3DBR56J	0.56 2W M-Film
R407	VRS-CY1JF102J	1k 1/16W M-Ox.	R751	VRD-MN2BE473J	47k 1/8W Carbon
R408	VRS-CY1JF471J	470 1/16W M-Ox.	R801	VRD-MN2BE332J	3.3k 1/8W Carbon
R409	VRD-MN2BE562J	5.6k 1/8W Carbon	R802	VRS-CY1JF332J	3.3k 1/16W M-Ox.
R410	VRD-RA2BE154J	150k 1/8W Carbon	R803	VRS-CY1JF222J	2.2k 1/16W M-Ox.
R411	VRD-MN2BE153J	15k 1/8W Carbon	R804	VRS-CY1JF222J	2.2k 1/16W M-Ox.
R412	VRD-RA2BE561J	560 1/8W Carbon	R805	VRS-CY1JF222J	2.2k 1/16W M-Ox.
R413	VRS-CY1JF101J	100 1/16W M-Ox.	R806	VRS-CY1JF333J	33k 1/16W M-Ox.
R414	VRS-CY1JF101J	100 1/16W M-Ox.	R924	VRS-CY1JF750J	75 1/16W M-Ox.
R415	VRS-CY1JF101J	100 1/16W M-Ox.	R925	VRD-MN2BE104J	100k 1/8W Carbon
R416	VRS-CY1JF332J	3.3k 1/16W M-Ox.	R926	VRD-MN2BE104J	100k 1/8W Carbon
△ R451	VRS-RG2HC103J	10k 1/2W M-Ox.	R931	VRS-CY1JF750J	75 1/16W M-Ox.
R452	VRD-RM2HD153J	15k 1/2W Carbon	R932	VRS-CY1JF750J	75 1/16W M-Ox.
R453	VRD-RA2EE683J	68k 1/4W Carbon	R951	VRD-RA2BE101J	100 1/8W Carbon
R454	VRD-MN2BE102J	1k 1/8W Carbon	R952	VRD-MN2BE102J	1k 1/8W Carbon
R456	VRD-MN2BE682J	6.8k 1/8W Carbon	R953	VRS-CY1JF101J	100 1/16W M-Ox.
R458	VRD-MN2BE152J	1.5k 1/8W Carbon	R961	VRD-RA2BE101J	100 1/8W Carbon
△ R501	VRN-RL3ABR56J	0.56 1W M-Film	R962	VRD-RA2BE101J	100 1/8W Carbon
R510	VRD-MN2BE471J	470 1/8W Carbon	R2001	VRD-RA2BE562J	5.6k 1/8W Carbon
R511	VRD-RA2BE823G	82k 1/8W Carbon	R2002	VRD-MN2BE103J	10k 1/8W Carbon
R512	VRD-RA2BE124G	120k 1/8W Carbon	R2004	VRD-MN2BE101J	100 1/8W Carbon
R513	VRD-RA2BE473J	47k 1/8W Carbon	R2006	VRS-CY1JF103J	10k 1/16W M-Ox.
R514	VRD-MN2BE101J	100 1/8W Carbon	R2008	VRD-MN2BE333J	33k 1/8W Carbon
R519	VRD-RA2BE153G	15k 1/8W Carbon	R2009	VRD-RA2BE102J	1k 1/8W Carbon
			R2010	VRD-MN2BE102J	1k 1/8W Carbon
			R2012	VRS-CY1JF471J	470 1/16W M-Ox.
			R2016	VRS-CY1JF223J	22k 1/16W M-Ox.

Ref. No.	Part No.	Description
PWB-A: DUNTKA126WEL4		
MAIN UNIT (Continued)		
R2020	VRS-CY1JF223J	22k 1/16W M-Ox.
R2023	VRS-CY1JF223J	22k 1/16W M-Ox.
R2024	VRD-RA2BE682J	6.8k 1/8W Carbon
R2025	VRD-RA2BE682J	6.8k 1/8W Carbon
R2026	VRD-RA2BE682J	6.8k 1/8W Carbon
R2027	VRD-MN2BE682J	6.8k 1/8W Carbon
R2028	VRD-MN2BE102J	1k 1/8W Carbon
R2029	VRS-CY1JF103J	10k 1/16W M-Ox.
R2032	VRD-RA2BE103J	10k 1/8W Carbon
R2035	VRD-MN2BE223J	22k 1/8W Carbon
R2040	VRD-MN2BE102J	1k 1/8W Carbon
R2041	VRD-MN2BE333J	33k 1/8W Carbon
R2042	VRD-MN2BE101J	100 1/8W Carbon
R2043	VRS-CY1JF333J	33k 1/16W M-Ox.
R2044	VRD-MN2BE682J	6.8k 1/8W Carbon
R2045	VRD-MN2BE101J	100 1/8W Carbon
R2046	VRD-RA2BE101J	100 1/8W Carbon
R2047	VRS-CY1JF221J	220 1/16W M-Ox.
R2048	VRS-CY1JF562J	5.6k 1/16W M-Ox.
R2060	VRD-MN2BE221J	220 1/8W Carbon
R2061	VRD-MN2BE562J	5.6k 1/8W Carbon
R2062	VRD-MN2BE183J	18k 1/8W Carbon
R2063	VRD-MN2BE222J	2.2k 1/8W Carbon
R2064	VRD-RA2BE332J	3.3k 1/8W Carbon
R2068	VRS-CY1JF103J	10k 1/16W M-Ox.
R2069	VRS-CY1JF102J	1k 1/16W M-Ox.
R2070	VRS-CY1JF103J	10k 1/16W M-Ox.
R2071	VRD-RA2BE102J	1k 1/8W Carbon
R2101	VRS-CY1JF101J	100 1/16W M-Ox.
R2102	VRS-CY1JF101J	100 1/16W M-Ox.
R2201	VRD-MN2BE222J	2.2k 1/8W Carbon
R2202	VRS-CY1JF103J	10k 1/16W M-Ox.
R2203	VRS-CY1JF184J	180k 1/16W M-Ox.
R2211	VRD-MN2BE222J	2.2k 1/8W Carbon
R2212	VRS-CY1JF682J	6.8k 1/16W M-Ox.
R2213	VRS-CY1JF333J	33k 1/16W M-Ox.
R2401	VRS-CY1JF101J	100 1/16W M-Ox.
R2402	VRS-CY1JF101J	100 1/16W M-Ox.
R2403	VRD-MN2BE101J	100 1/8W Carbon
R2404	VRD-MN2BE101J	100 1/8W Carbon
R2501	VRD-MN2BE103J	10k 1/8W Carbon
R2503	VRD-MN2BE273J	27k 1/8W Carbon
R2504	VRD-MN2BE123J	12k 1/8W Carbon
R2505	VRD-MN2BE563J	56k 1/8W Carbon
R2506	VRD-MN2BE563J	56k 1/8W Carbon
R2507	VRD-MN2BE823J	82k 1/8W Carbon
R2508	VRD-MN2BE153J	15k 1/8W Carbon
R2509	VRD-MN2BE272J	2.7k 1/8W Carbon
R2601	VRD-RA2BE331J	330 1/8W Carbon
R3001	VRD-RA2BE101J	100 1/8W Carbon
R3002	VRD-RA2BE101J	100 1/8W Carbon
R3003	VRS-CY1JF105J	1M 1/16W M-Ox.
R3004	VRS-CY1JF104J	100k 1/16W M-Ox.
R3005	VRS-CY1JF623J	62k 1/16W M-Ox.
R3007	VRS-CY1JF332J	3.3k 1/16W M-Ox.
R3008	VRS-CY1JF302J	3k 1/16W M-Ox.
R3010	VRS-CY1JF392J	3.9k 1/16W M-Ox.
R3011	VRD-MN2BE102J	1k 1/8W Carbon
R3012	VRS-CY1JF102J	1k 1/16W M-Ox.
R3013	VRD-MN2BE104J	100k 1/8W Carbon
R3014	VRD-MN2BE104J	100k 1/8W Carbon
R3015	VRD-RA2BE101J	100 1/8W Carbon
R3016	VRD-MN2BE750J	75 1/8W Carbon
R3017	VRD-RA2BE102J	1k 1/8W Carbon
R3018	VRD-RA2BE102J	1k 1/8W Carbon

SWITCHES

S2501	QSW-K0079GEZZ	Power
	or	
	QSW-K0202PEZZ	

Ref. No.	Part No.	Description
S2502	QSW-K0079GEZZ	Vol-Down
	or	
	QSW-K0202PEZZ	
S2503	QSW-K0079GEZZ	Vol-Up
	or	
	QSW-K0202PEZZ	
S2504	QSW-K0079GEZZ	CH-Down
	or	
	QSW-K0202PEZZ	
S2505	QSW-K0079GEZZ	CH-Up
	or	
	QSW-K0202PEZZ	

MISCELLANEOUS PARTS

△ RY701	RLRYJ0081CEZZ	Relay
	or	
	RLRYJ0088CEZZ	
	or	
	RLRYJ0094CEZZ	
△ F701	QFS-B4023CEZZ	Fuse, 4A 125V
	or	
	QFS-B4021GEZZ	
FB601	RBLN-0047CEZZ	Ferrite Bead
FB702	RBLN-0036CEZZ	Ferrite Bead
FB704	RBLN-0037CEZZ	Ferrite Bead
FB706	RBLN-0037CEZZ	Ferrite Bead
FH701	QFSDH1013CEZZ	Fuse Holder
FH702	QFSDH1014CEZZ	Fuse Holder
J931	QSOCN0430CEZZ	Socket, S-Video
P351	QPLGN0461CEZZ	Plug, 4-pin (S)
P601	QPLGN0160FJZZ	Plug, 5-pin (K)
P621	QPLGN0461CEZZ	Plug, 4-pin (YBN)
P651	QPLGN0361CEZZ	Plug, 3-pin
P701	QPLGN0207CEZZ	Plug, 2-pin (M)
P703	QPLGN0269GEZZ	Plug, 2-pin (P)
P901	QPLGN0561CEZZ	Plug, 5-pin (HA)
P903	QPLGN0561CEZZ	Plug, 5-pin (GBN)
P931	QPLGN0661CEZZ	Plug, 6-pin (KC)
P2401	QPLGN0561CEZZ	Plug, 5-pin
SC401	QSOCN0585CEZZ	Socket, 5-pin (KA)
SC402	QSOCN0585CEZZ	Socket, 5-pin (KB)
RMC2601	RRMCU0237CEZZ	R/C Receiver
RDA501	PRDAR0234PEFW	Heat Sink, for IC501
RDA604	PRDAR0233PEFW	Heat Sink, for Q602
RDA701	PRDAR1008MEFW	Heat Sink, for IC701
RDA751	PRDAR5072CEFW	Heat Sink, for IC751
TAN921	QTANJ0323CEZZ	AV Terminal
	LX-BZ3049GEFD	Screw
	LX-HZ3007MEFD	Screw
	PSPAK0001MEKZ	Holder

Ref. No.	Part No.	Description
PWB-B: DUNTK9510WEK1		
CRT UNIT		
TRANSISTORS		
Q851	VS2SC3198-Y-1	2SC3198(Y)
Q852	VS2SC3789//2E	2SC3789
	or	
	VS2SC3619LB1E	
Q853	VS2SC3198-Y-1	2SC3198(Y)
Q854	VS2SC3789//2E	2SC3789
	or	
	VS2SC3619LB1E	
Q855	VS2SC3198-Y-1	2SC3198(Y)
Q856	VS2SC3789//2E	2SC3789
	or	
	VS2SC3619LB1E	
Q881	VS2SA1266-Y-1	2SA1266(Y)
DIODES		
You can substitute "RH-DX0475CEZZ" for "VHD1SS119//-1".		
D881	VHD1SS119//-1	Diode
D882	VHD1SS119//-1	Diode
D884	VHD1SS119//-1	Diode
COIL		
L851	VP-MK820K0000	Peaking 82μH
CAPACITORS		
<i>[EL... Electrolytic]</i>		
C851	VCCSPA1HL391J	390p 50V Ceramic
C852	VCCSPA1HL331J	330p 50V Ceramic
C853	VCCSPA1HL391J	390p 50V Ceramic
C854	RC-KZ0024CEZZ	0.001 2kV Ceramic
	or	
	VCKYPB3DE472Z	0.0047 2kV Ceramic
C883	VCEA0A1HW106M	10 50V EL.
RESISTORS		
<i>[M-Ox... Metal Oxide]</i>		
R851	VRD-RA2BE470J	47 1/8W Carbon
R852	VRD-RA2BE181J	180 1/8W Carbon
R853	VRD-RA2BE121J	120 1/8W Carbon
R855	VRD-RA2BE471J	470 1/8W Carbon
R856	VRD-RA2BE221J	220 1/8W Carbon
△ R857	VRS-VV3LB123J	12k 3W M-Ox.
R858	VRD-RM2HD222J	2.2k 1/2W Carbon
R859	VRD-RA2BE470J	47 1/8W Carbon
R860	VRD-RA2BE181J	180 1/8W Carbon
R861	VRD-RA2BE121J	120 1/8W Carbon
R863	VRD-RA2BE471J	470 1/8W Carbon
R864	VRD-RA2BE221J	220 1/8W Carbon
△ R865	VRS-VV3LB123J	12k 3W M-Ox.
R866	VRD-RM2HD222J	2.2k 1/2W Carbon
R867	VRD-RA2BE470J	47 1/8W Carbon
R868	VRD-RA2BE181J	180 1/8W Carbon
R869	VRD-RA2BE121J	120 1/8W Carbon
R871	VRD-RA2BE471J	470 1/8W Carbon
R872	VRD-RA2BE221J	220 1/8W Carbon
△ R873	VRS-VV3LB123J	12k 3W M-Ox.
R874	VRD-RM2HD222J	2.2k 1/2W Carbon
R881	VRD-RA2BE102J	1k 1/8W Carbon
R882	VRD-RA2BE331J	330 1/8W Carbon
R883	VRD-RA2BE561J	560 1/8W Carbon
R884	VRD-RA2BE152J	1.5k 1/8W Carbon
R895	VRD-RA2BE470J	47 1/8W Carbon
MISCELLANEOUS PARTS		
P851	QPLGN0541CEZZ	Plug, 5-pin (GBN)
P852	QPLGN0441CEZZ	Plug, 4-pin (YBN)
SC851	QSOCV0937CEZZ	CRT Socket

Ref. No.	Part No.	Description
PWB-K: DUNTKA114WEK0		
S-VIDEO UNIT		
INTEGRATED CIRCUIT		
IC1501	VHiM52055FP-1	M52055FP
TRANSISTORS		
You can substitute "VS2SD601AR/-1" for "VS2SC2412KQ-1".		
Q1501	VS2SC2412KQ-1	2SC2412K
Q1502	VS2SB709AR/-1	2SB709AR
	or	
	VS2SA1037KR-1	
Q1503	VS2SC2412KQ-1	2SC2412K
Q1504	VS2SC2412KQ-1	2SC2412K
DIODES		
You can substitute "RH-DX0475CEZZ" for "VHD1SS119//-1".		
D1501	VHD1SS119//-1	Diode
D1502	VHD1SS119//-1	Diode
D1503	RH-EX0631GEZZ	Zener Diode, 9V
D1504	RH-EX0631GEZZ	Zener Diode, 9V
COILS		
L1501	VP-XF6R8K0000	Peaking 6.8μH
L1502	VP-XF6R8K0000	Peaking 6.8μH
L1503	VP-XF8R2K0000	Peaking 8.2μH
CAPACITORS		
<i>[EL... Electrolytic]</i>		
C1501	VCEA0A1CW106M	10 16V EL.
C1502	VCCCCY1HH470J	47p 50V Ceramic
C1503	VCKYCY1HF103Z	0.01 50V Ceramic
C1504	VCCCCY1HH271J	270p 50V Ceramic
C1505	VCCCCY1HH330J	33p 50V Ceramic
C1506	VCCCCY1HH151J	150p 50V Ceramic
C1507	VCCCCY1HH330J	33p 50V Ceramic
C1508	VCE9GA1CW106M	10 16V EL. (N.P)
C1509	VCEA0A1CW106M	10 16V EL.
C1510	VCKYCY1HF103Z	0.01 50V Ceramic
C1511	VCEA0A1CW106M	10 16V EL.
C1512	VCKYCY1HF103Z	0.01 50V Ceramic
C1513	VCKYCY1HF103Z	0.01 50V Ceramic
RESISTORS		
<i>[M-Ox... Metal Oxide]</i>		
R1501	VRS-CY1JF223J	22k 1/16W M-Ox.
R1502	VRS-CY1JF123J	12k 1/16W M-Ox.
R1503	VRS-CY1JF122J	1.2k 1/16W M-Ox.
R1504	VRS-CY1JF102J	1k 1/16W M-Ox.
R1505	VRS-CY1JF152J	1.5k 1/16W M-Ox.
R1506	VRS-CY1JF102J	1k 1/16W M-Ox.
R1507	VRS-CY1JF102J	1k 1/16W M-Ox.
R1508	VRS-CY1JF561J	560 1/16W M-Ox.
R1509	VRS-CY1JF101J	100 1/16W M-Ox.
R1510	VRS-CY1JF181J	180 1/16W M-Ox.
R1511	VRS-CY1JF152J	1.5k 1/16W M-Ox.
R1512	VRS-CY1JF333J	33k 1/16W M-Ox.
R1513	VRS-CY1JF122J	1.2k 1/16W M-Ox.
R1514	VRS-CY1JF101J	100 1/16W M-Ox.
R1515	VRS-CY1JF102J	1k 1/16W M-Ox.
R1516	VRS-CY1JF682J	6.8k 1/16W M-Ox.
R1517	VRS-CY1JF103J	10k 1/16W M-Ox.
R1518	VRS-CY1JF101J	100 1/16W M-Ox.
R1519	VRS-CY1JF101J	100 1/16W M-Ox.
MISCELLANEOUS PARTS		
P1501	QPLGN0585CEZZ	Plug, 5-pin (KA)
P1502	QPLGN0585CEZZ	Plug, 5-pin (KB)
P1503	QPLGN0661CEZZ	Plug, 6-pin (KC)

Ref. No.	Part No.	Description
PWB-H: DUNTK9310WEK1		
FRONT AV UNIT		

MISCELLANEOUS PARTS		
J1001	QJAKE0053GEZZ	Jack, Video in
J1002	QJAKE0055GEZZ	Jack, Audio in (L)
J1003	QJAKE0059GEZZ	Jack, Audio in (R)
P1001	QPLGN0541CEZZ	Plug, 5-pin (HA)

Ref. No.	Part No.	Description
MISCELLANEOUS PARTS		

△ ACC701	QACCD3070CESA	AC Cord
	QCNW-0259MEZZ	Connecting Cord
	QCNW-0134MEZZ	Connecting Cord
	QCNW-0145MEZZ	Connecting Cord
	QCNW-0167MEZZ	Connecting Cord
	QCNW-0252MEZZ	Connecting Cord
SP1	VSP0080PBL4YS	Speaker, (L)
	or	
	VSP0080PBK9YA	
SP2	VSP0080PBL4YS	Speaker, (R)
	or	
	VSP0080PBK9YA	

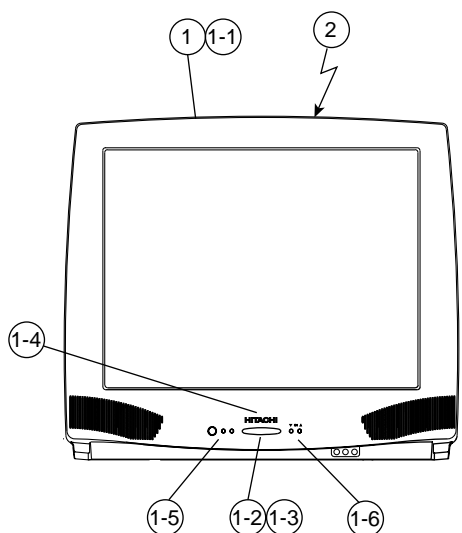
SUPPLIED ACCESORRIES	
H462472	Warranty & Registration Card
H462771	Operation Manual
CLU-341U	Infrared R/C Unit

Ref. No.	Part No.	Description
PACKING PARTS (NOT REPLACEMENT ITEM)		
	SPAKC0677MEZZ	Packing Case
	SPAKX0159MEZZ	Buffer Material
	SSAKA0004MEZZ	Polyethylene Bag
	SPAKP0032MEZZ	Polyethylene Sheet

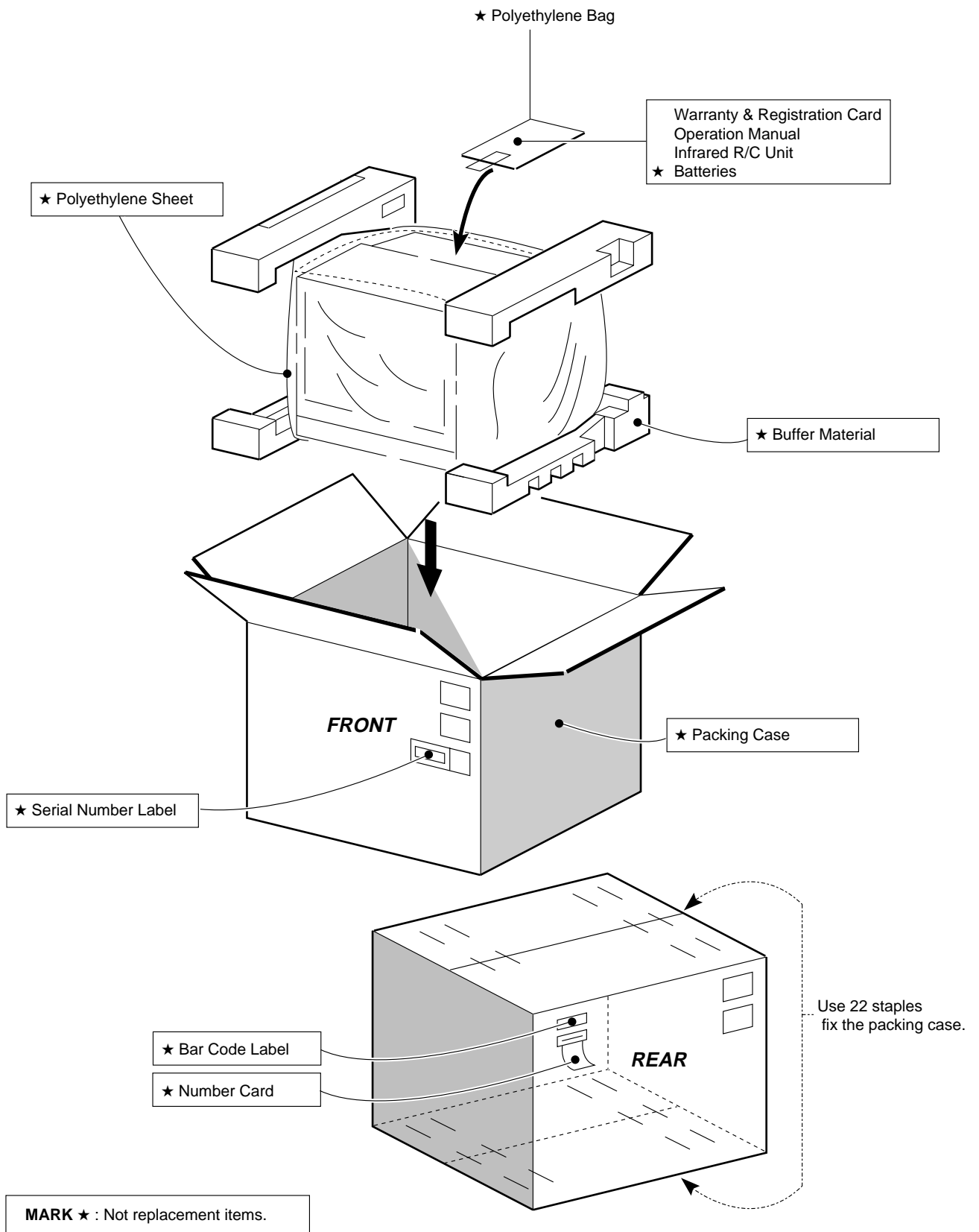
CABINET PARTS

1	CCABA1336MES0	Front Cabinet Ass'y
1-1	<i>Not Available</i>	Front Cabinet
1-2	GCOVA1011MEKA	Lens for R/C
1-3	GMADT0093MEKA	Window for R/C
1-4	HBDGE1007MESA	Badge "HITACHI"
1-5	JBTN-1057MEKA	Button, Power, Vol-up/down
1-6	JBTN-1058MEKA	Button, Ch-up/down
2	GCABB1159MEKA	Rear Cabinet

CABINET PARTS LOCATION



PACKING OF THE SET



HITACHI